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-Q=/cgn2 1/USPTO_spool/US09214836/runat 14082003 085039 7593/app_query.fasta_1.398
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-Q=-CHAITS=bite -CTART=1 -END=-1 -MATRIX=blosum62 -TTRAUS=human40.cdi -LIST=45
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-DCCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=25 -MODE=LOCAL
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-USER=US09214836 @CCGN 1 1 3608 @runat 14082003 085039 7593 -NCPU=6 -ICPU=3
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-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPEXT=0.5 -FGAPOP=6
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168.237 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result

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                      l (bases 1 to 36)
Adema, G.J. and Figdor, C.G.
Adema, G.J. and Figdor, C.G.
Melanoma associated antigenic polypeptide, ep
vaccines against melanoma
Patent: EP 0668350-A 9 23-AUG-1995;
AKZO NOBEL NV (NL)
Other publication ZA 9501239 951019
Other publication FJ 9728193 951024
Other publication FJ 950665 950817
Other publication CA 2142575 950817
Other publication AU 1227295 950824.
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Sequence 9 from Patent EP0668350
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Zabarovsky,E.R.
Direct Submission
Submitted (16-MAY-2001) Microbiology
Submitted (16-MAY-1001) Microbiology
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Kutsenko,A.S., Gizatullin,R.Z., Al-Amin,A.N., Wang,F., Kvasha,S.M., Podowski,R.M., Matushkin,Y.G., Gyanchandani,A., Muravenko,O.V., Podowski,R.M., Matushkin,Y.G., Protopopov,A.I., Kashuba,V.I., Levitsky,V.G., Kolchanov,N.A., Protopopov,A.I., Kashuba,V.I., Kisselev,L.L., Wasserman,W., Wahlestedt,C. and Zabarovsky,E.R. NotI flanking sequences: a tool for gene discovery and verification
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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/db_xref="taxon:32644"
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synthetic construct

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RESULT 5
AX133655
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Sequence 109 from Patent W00130382.
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TTPGQAPTAEPSGTTSVQVPTTEVISTAPVQMPTAESTGMTPEKVPVSEVMGTTLAEM
STPEATGMTPAEVSIVVLSGTTAAQVTTTEWVETTARELPIPEPEGPDASSIMSTESI
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/db xref="G1:14139698"
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IWYNNTIINGSQVWGGQPVYRQETDDACIFPDGGCFSGSWGXGKSFVVVWKTWGQYW
QVLGGPVSGLSIGTGRAMLGTHTWBCTVVYHRRGSRSYVPLAHSSSAFTLMDQVPFSVS
QVLGGPVSGLSIGTGRAMLGTHTWBCTVVYHRRGSRSYVPLAHSSSAFTLMDQVPFSVS
VSQLRALDGGNKHFLRNQPLTFALQLHDPSGYLAEADLSYTWDFGDSSGTLISRALVV
                                    FSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQV"
                                                   TGSLGPLLDGTATLRLVKRQVPLDČVLYRYGSFSVTLDIVQGIESABILQAVPSGEGD
AFELTVSCQGGLPKEACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYC
LNVSLADTNSLAVVSTQLIMPGQEAGLGQVPLIVGILLVLMAVVLASLIYRRRLMKQD
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/mol type="genomic DNA"
/db_xref="texon:32630"
/note="modified gp 100"
552 c 552 g 451 t
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Alignment Scores:

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2 (bases 1 to 1986)
Kalnine, N., Chen, X., Rolfs, A., Halleck, A., Hines, L.,
                                                                       Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1986)

Kalnine, N., Chen, X., Rolfs, A., Halleck, A., Hines, L., Eisenstein, S., Koundinya, M., Raphael, J., Moreira, D., Kelley, T., LaBaer, J., Lin, Y., Phelan, M., and Farmer, A.
                                                                                                                                                           Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                       Homo sapiens silver homolog (mouse) mRNA, complete cds.
BT007202
BT007202.1 GI:30583242
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Enhancing the immune response to an antigen by presensitizing
an inducing agent prior to immunizing with the inducing agent
the antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1 from Patent WO0149317.
AX192347
                            Unpublished
                                                           Cloning of human full-length CDSs in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent: WO 0149317-A 1 12-JUL-2001;
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/mol_type="genomic DNA"

/db_xref="taxon:32630"
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    Eisenstein,S.,
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RESULT 8
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This CDS clone is a part of a collection of human full length expression clones generated by BD Biosciences Clontech and the Harvard Institute of Proteomics. Each CDS has been cloned in two forms: with and without stop-codon (to allow fusion with C-terminal tag). The CDS has been directionally cloned using BD In-Fusion(TM) cloning system between the Sall and HindIII sites of the pDNR-DUAL vector. Additional sequences in the clone: 'ACC' after Sall site and before 'ATG' to provide Kozak consensus sequence; 'GG' after last codon and before HindIII site to maintain reading frame. Clone distribution: http://bioinfo.clontech.com/orfclones.
                                                                                                                                                                                                                                                                                                                                           460
synthetic construct artificial sequences.

1 (bases 1 to 1986)

Kalnine,N., Chen,X., Rolfs,A., Halleck,A., Hines,L., Eisenstein,S., Kalnine,N., Raphael,J., Moreira,D., Kelley,T., LaBaer,J., Lin,Y.,
                                                                                                                                                                                                                            BT007991 1986 bp mRNA linear SYN 13-MA Synthetic construct Homo sapiens silver homolog (mouse) mRNA,
                                                                                                                         synthetic construct
                                                                                                                                                              BT007991.1 GI:30584820
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'THTYLEBGPVTAQVVLQAAI PLTSCGSSSVPGTTDGHRFTAEABHTTAGQVFTEVVG
TTFGQAFTAEBSGTTSVQVFTTEVISTAEVGWFTAESTGMTPEKVPUSBVMGTTLAEN
STPEATGMTPAEVSIVVLSGTTAAQVTTTEWVETTARELPIPEBEGDDASSIMSTESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product="silver homolog (mouse)"
/protein_id="AAP35866.1"
/protein_id="AAP35866.1"
/db_xref="GC1:30583243"
/translation="MDLVLKRCLLHLAVIGALLAVGATKVPRNQDWLGVSRQLRTKAW
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INVNNTIINGSQVWGGQPVYPOETDACIFDOGGPCESGWSQKRSFYVYMKTWGQVY
QVLGGPVSGLSIGTGRAMLGTHTMEVTVYHRRGSRSYVPLAHSSSAFTIIDQVPFSVS
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                                 RESULT 9
HSU01874
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DEFINITION
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                                       Human me20m mRNA, complete U01874
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                   U01874.1 GI:494939
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                                                                               HSU01874
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                                                                                                                                                                                                                                                     x BT007991 (1-1986)
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/db_xref="taxon:32630"
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460 AAGACCTGGGGCCAATACTGGCAAGTT 486
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This CDS clone is a part of a collection of human full length
expression clones generated by BD Biosciences Clontech and the
Harvard Institute of Proteomics. Each CDS has been cloned in two
forms: with and without stop-codon (to allow fusion with C-terminal
tag). The CDS has been directionally cloned using BD In-Fusion(TM)
cloning system between the SalI and HindIII sites of the pDNR-DUAL
vector. Additional sequences in the clone: 'ACC' after SalI site
and before 'ATG' to provide Kozak consensus sequence; 'GG' after
last codon and before HindIII site to maintain reading frame.
Clone distribution: http://bboinfo.clontech.com/orfclones.
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2 (bases 1 to 1986)

Kalnine, N., Chen, X., Rolfs, A., Halleck, A., Hines, Washani, J., Moreira, D., Kelley, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Phelan, M. and Farmer, A. Cloning of human full-length CDSs in BD Creator (TM) System Donor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Koundinya, M., Raphael, J., Moreira, D., Phelan, M. and Farmer, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /protein_id="AAP36663.1"
/db_xref="G1:30584821"
/db_xref="G1:30584821"
/tanslation="WDLVLRECLLHLAVIGALLAVGATKVPRNQDWLGVSRQLRTKAW
NRQLYFEWTEAQRLDCWRGGQVSLKVSNDGPTLIGANASFSIALNFPGSQKVLPDGQV
INVNNTIINGSQWGGQPVYPQETDDACIFPDGGPCPSGSWSGKRSFYVVWKTWGQYW
OVLGGPVSGLSIGTGRAMLGTHTMEVTVYHRRGSRSYVPLAHSSSAFTITDQVPFSVS
VSQLRALDGGNKHFLRNQPLTFALQLHDPSGYLAEADLSYTWDFGDSSGTLISRALVV
THTYLEPGPVTAQVVLQAAIPLTSCGSSPVPGTTDGHRFYAAAANTTAGQVFTTEVUG
THTYLEPGPVTAQVVLQAAIPLTSCGSSPVPGTTDGHRFYAAAANTTAGQVFTTEVUG
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FSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQVL"
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STPERTGMTPAEVSIVVLSGTTAAQVTTTEMVETAELPIPEEGPDASSIMSTESI
TGSLGPLLDGTATLELVKRQVPLDCVLYRYCSFSVTLDIVGGIESAEILQAVESGEGD
AFELTVSCQGGLPKEACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYC
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ev.T., LaBaer,J., Lin,Y.,
   linear
PRI 26-MAY-1994
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AUTHORS
                                                        DEFINITION
ACCESSION
                                                                                                               RESULT 10
HUMGPMSS
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Best Local Similarity:
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     SOURCE
                     KEYWORDS
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JOURNAL
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mat_peptide
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melanocyte-specific secreted glycoprotein. Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
Submitted (16-SEP-1993) Michael G.
Pharmaceutical Research Institute,
                                       M32295.1 GI:183559
                                                                          HUMGPMSS 2114 bp
Human 95 kD melanocyte-specific
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Maresh,G.A., Marken,J.S., Neubauer,M., Aruffo,A., Hellstrom,I.,
Hellstrom,K.E. and Marquardt,H.
Cloning and expression of the gene for the melanoma-associated ME20
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AFELTVSCQGGLPKEACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYC
LNVSLADTNSLAVVSTQLIMPGQEAGGLGQVPLIVGILLVLMAVVLASLIYRRRLMKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VSQLRALDGGNKHFLRNOPLTFALQLHDPSGYLABADLSYTWDFGDSSGTLISRALVV
THTYLEPGPVTAQVVLQAAIFLITSCGSSPVGGTTDGHRRTABANTTAGQVFTTEVVG
TTPGQAPTABEGGTTSVQVPTTEVISTAPVQWFTABSTGMTPEKVPVSBVMGTTLAB
STPBATGMTPAEVSIVVLSGTTAAQVTTTEWVETTARELPIPEGFDASSIMSTESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NRQLYPEWTEAQRLDCWRGGQVSLKVSNDGPTLIGANASFSIALNFPGSQKVLFDGQV
IWVNNTIINGSQVWGGQPVYPQETDDACIFPDGGPCPSGSWSQKRSFVYVWKTWGQYW
QVLGGPVSGLSIGTGRAMLGTHTMEVTVYHRRGSRSYVPLAHSSSAFTITDQVPFSVS
                                                                                                                                                                                                                                             x HSU01874 (1-2026)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="me20m"
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1. .2026
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/db_xref="GI:494940"
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clone="hf12-2"
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mol_type="mRNA"
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e_lib="cdm8"
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Matches:
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                                                                    secreted glycoprotein mRNA,
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3005 1st Ave, Seattle, WA 98121
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                   FEATURES
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Best Local Similarity:
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                     1 (bases 1 to 2115)
Adema,G.J. and Figdor,C.G.
Melanoma associated antigenic polypeptide, ep
vaccines against melanoma
Patent: EP 0668350-A 1 23-AUG-1995;
AKZO NOBEL NV (NL)
Other publication ZA 9501239 951019
Other publication FI 950665 950817
Other publication CA 2142575 950817
Other publication AU 1227295 950824.
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                                                                                                                                                                                                                                                                                                                                                                 Sequence 1 from Patent A45993
                                                                                                                                                                                                                                                             unclassified
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 2114)
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GGSGTYCLNVSLADTNSLAVVSTQLIMPGQEAGLGQVPLLVGILLVLMAVVLASLIYR
RRLMKQDFSVPQLPHSSSHWLKLPASSALVPLVRIAPSSVGSRSEYSHMML"
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db_xref="GI:386754"
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|mol_type="mRNA"
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Us-09-214-836-2 (1-9) x AR269281 (1-2115)
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Sequence 1 from patent US 6500919.
AR269281
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Adema,G.J. and Figdor,C.G.
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TGSLGPLDGTATLRLVKRQVPLDCVLVRYGSFSVTLDIVGGIESAEILQAVPSGEGD
AFELTVSCQGGLPKEACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYC
LNVSLADTNSLAVVSTQLIMPGGEAGLGQVPLTVGILLVLMAVVLASLIVRRRLMKQD
FSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQV"
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/organism="unknown"
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/db_xref="taxon:32644"
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/tissue_type="MELANOMA"
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Sequence 1 from Patent WO0170767.
AX274950
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                                                                                                                                                                                                                                                                                 Therapeutic anti-melanoma compounds Patent: WO 0170767-A 1 27-SEP-2001; GENZYME CORPORATION (US)
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Homo sapiens
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Kipps, T.J. and Wu, Y.

Vaccines with enhanced intracellular processing

Patent: US 6287569-A 1 11-SEP-2001;
                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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STPEATGMTPAEVSIVVLSGTTAAQVTTTEWVETTARELPIPEPEGPDASSIMSTESI
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                                                                                                                                                                                                mol_type="genomic_DN
/db_xref="taxon:9606"
                                                                                                                                                                                                                  organism="Homo sapiens"
                                                                                                                                                                                                                                                                  location/Qualifiers
                                                                                                                                                     note="unnamed protein product" codon_start=1
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REFERENCE
AUTHORS
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S73003
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Sequence 1 from
AX354933
                                                                                                                                    S73003 2130 bp mRNA linear PRI 26-JAN-1 gp100=melanocyte lineage-specific antigen/Pmel17 homolog [human,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nicolette, C.A.
Therapeutic anti-melanoma compounds
Patent: WO 0192294-A 1 06-DEC-2001;
GENZYME CORPORATION (US)
                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota;
Adema, G.J., de Boer, A.J., Vogel, A.M.,
                                                       Homo sapiens
                                                                                              S73003.1
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                                                                 Homo sapiens (human)
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AFELTYSCQGGLDKEACMEISSFGCQPPAQRLCQPVLBSPACQLVLHQILKGGSGTYC
LNVSLADTNSLAVVSTQLIMPGQEAGLGQVPLIVGILLVLMAVVLASLIYRRRLMKQD
FSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQV"
1 587 c 575 g 484 t
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/db_xref="taxon:9606"
_587 c 575 g
                                                                                              GI:639589
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Patent WO0192294.
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Primates;
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Loenen, W.A. and Figdor, C.G.
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REFERENCE
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J. Biol. Chem.
94327568
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                                                                              especially melanoma
Patent: EP 1222928-A 3 17-JUL-2002;
Universitaet Zuerich Institut fuer Medizinische Virologie (CH)
                                                                                                                                         Moelling, K., Nawrath, M. and Pavlovic, Pharmaceutical compositions for treat
                                                                                                                                                                                                                                                                                                                                        AX474662 2131 bp
Sequence 3 from Patent EP1222928.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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TGSLGPLLDGTATLRLVKRQVPLDCVLYRYGSFSVTLDIVQGIESAEILQAVPSGEGD
AFELTVSCQGGLPKEACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYC
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VSQLRALDGANKHFLRNQPLTFALQLHDFSGYLAEADLSYTWPFGDSSGTLISRALVV
THYYLBEGFVTAQVVLQAAIPLTSCGSSPVPGTTDGHRFATABAPNTTAQVQVPTTEVVS
TTPGQAPTAEPSGTTSVQVPTTEVISTAPVQMPTAESTGMTPEKVPVSEVMGTTLAEM
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587 c 575 g 484 t
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NRQLYPEWTEAQRLDCWRGGQVSLKVSNDGPTLIGANASFSIALNFPGSQKVLPDGQV
IWNNTIINGSQVWGGQPVYPQETDDACIFPDGGPCPSGSWSQKRSFVYVWKTWGQYW
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/organism="Homo sapiens'
/mol_type="genomic DNA"
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/product="gp100"
/protein_id="AAC60634.1"
/db_xref="GI:639590"
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elanoma marker protein; This sequence comes from Fig. 6"
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mol_type="mRNA"
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                                                                                                                                                                                                                                                                                                                      Original
                                                                                                                                                                                                                                                                                                                                                                              human chromosome 12
Proc. Natl. Acad. Sci. U.S.A. 88
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75 a 588 c 578 g 490 t
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                                                                                                                                                                                                                                                                                                 source text: Homo sapiens skin cDNA to mRNA Location/Qualifiers
                                                                                                                                                   /cell_line="primary culture"
/cell_type="melanocyte"
/tissue_type="skin"
                                                                                                                                                                                                              /mol_type="mxna"
/db_xref="taxon:9606"
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/db_xref="GI:22214012"
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2._.2018
'product="Pmel 17 protein"
                  /gene="Pmel 17"
/codon_start=1
                                                                             gene="Pmel 17"
                                                                                                                    /gene="Pmel 17"
                                                                                                                                                                                                                                       organism="Homo sapiens"
/mol_type="mRNA"
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BC001414
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Web site: http://www.nisc.nih.gov/
Contact: nisc mgc@nhgri.nih.gov
Shevchenko,Y., Wetherby.K.D., Beckstrom-Sternberg,S.M.,
Benjamin,B., Blakesley.R.W., Bouffard,G.G., Brinkley,C., Brooks,S.,
Dietrich,N.L., Guan,X., Gupta,J., Ho,S.-L., Karlins,E., Legaspi,R.,
Lim,M., Maduro,Q.L., Masiello,C., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Snyder,B., Stantripop,S., Thomas,P.J.,
Tiongson,E.B., Touchman,J.W., Tsurgeon,C., Vogt,J.L., Walker,M.A.,
Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                        CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramur
Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                         NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
Submitted (12-DEC-2000) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 2134)
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                                                                                                                                                                                                                    Gaithersburg, Maryland;
                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-remail.nih.gov
Tissue Procurement: ATCC
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RRLMKQDFSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQV"
1 588 c 578 q 490 +
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VSQLARLDGGKHFLRNGPLTPALQLIDESGYLAEADLSYTWDFGDSSGTLISRAPVV
THTLLEBGBYTAQVLIQAAI PLTSCGSSPVPGTTDGHRFTABAPNTTAGVPTTEVVQ
TTPGQAPTABEPSGTTSVQVPTTEVISTAPVQMPTABSTGMTPBKVPVSEVMGTTLABM
STPBARGMTPALBVSITVLSGTTAAQVTTTEWVSTTARBLE IEPBEGPDASSINSTESI
TGSLGPLLDGTATLRLVRAGVPLDGVLYRYKGSFSVTLDIVGSIESABILDAVPSGEBG
AFELTVSCQGGLPKBACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYC
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NRQLYPEWTEAQRLDCWRGGQVSLKVSNDGPTLIGANASFSIALNFPGSQKVLFDGQV
IWVNNTIINGSQVWGGQPVYPQETDDACIFPDGGPCPSGSWSQKRSFVYVWKTWGQYW
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/db_xref="GI:190106"
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Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAL Plate: 4 Row: i Column: 8

selected for full length sequencing because it

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    Score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 123 from Patent AX133528
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product="silver (mouse homolog) like"
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/db_xref="GI:12655123"
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IWNNTIINGSQVWGGQPVYPOETDDACIFPDGGFCFSGSWSQVSVTWFWGQYW
QVLGGPVSGLSIGTGRAMLGTHTWEDTVYHRRGSRSYVPLAHSSSAFTITOQVPFSYS
VSQLRALDGGNKHFLRNQFLTFALQLH9PSGYLAEADLSYTWDFGDSSCTLISRALVV
THTYLEBGPVTAQVULQAAIRULTSCGSSPVPGTTDGHRFTAEAPNTTAGQVFTTEVUG
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LNVSLADTNSLAVVSTQLIMPGQEAGLGQVPLIVGILLVLMAVVLASLIYRRRLMKQD
FSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQV"
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STPEATGMTPAEVSIVVLSGTTAAQVTTTEMVETTARELPIPEPEGPDASSIMSTESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGSLGPLLDGTATLRLVKRQVPLDCVLYRYGSFSVTLDIVQGIESAEILQAVPSGEGD
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/clone_lib="NIH_MGC_21"
/lab_host="DH10B-R"
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Location/Qualifiers
                                                                                                    /note="modified
632 c 657
                                                                                                                                         /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
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|mol_type="mRNA"
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                                                            US-09-214-836-2 (1-9) x AK092881 (1-2758)
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Direct Submission

Submitted (04-JUL-2002) Takao Isogai, FLJ Project(HRI Team); 2-6-7

Submitted (04-JUL-2002) Takao Isogai, FLJ Project (HRI Team); 2-6-7

Kazusa-Kamatari, Kisarazu, Chiba 292-0812, Japan

(B-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)

NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing:

Research Association for Biotechnology (RAB); cDNA library construction: Helix Research Institute (HRI) (supported by Japan construction: Helix Research Institute (HRI)
1 LysValTrpGlyGlnTyrTrpGlnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kusano, J., Watanabe, M., Fujimori, K., Tanai, H., Ishida, M., Yamashita, H., Chiba, Y., Sugiyama, T., Irie, R., Otsuki, T., Sato, H., Ota, T., Wakamatsu, A., Ishii, S., Yamamoto, J., Isono, Y., Kawai-Hio, Y., Saito, K., Nishikawa, T., Kimura, K., Matsuo, K., Kawai-Hio, Y., Saito, K., Nishikawa, T., Kimura, K., Magatsuma, M., Nakamura, Y., Sekine, M., Kikuchi, H., Kanda, K., Wagatsuma, M., Takahashi-Fujii, A., Oshima, A., Sugiyama, A., Kawakami, B., Suzuki, Y., Sugano, S., Nagahari, K., Masuho, Y., Nagai, K. and Isogai, T. NEDO human cDNA sequencing project
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/clone_Tib="SPLEN2"
/note="cloning vector:
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                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="taxon:9606"
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H., Ishida,M.,
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This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em:, EMBL; Sw:,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://www.sanger.ac.uk/Projects/C_elegans/wormpep This sequence was generated from part of bacterial clone contigs of human chromosome 1, constructed by the Sanger Centre Chromosome 1 Mapping Group. Further information can be found at http://www.sanger.ac.uk/HGP/Chrl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cambridgeshire, CB10 1SA, UK. E-mail enquiries:
humquery@sanger.ac.uk Clone requests: clone-request@sanger.ac.uk
On Jun 13, 2002 this sequence version replaced gi:20386813.
During sequence assembly data is compared from overlapping clones.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pieter de Jong. For further details see http://www.chori.org/bacpac/home.htm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RP4-700P11 is from the library RPCI-4 constructed by the group of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWISSPROT; {\tt Tr:}, {\tt TREMBL}_i {\tt wp:}, {\tt WORMPEP}_i Information on the WORMPEP database can be found at
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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clone="RP4-700P11"
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Boguslavkiy, L., Boukhgalter, B., Brown, A., Burkett, G., Castle, A.,
Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P.,
DeArellano, K., Dewar, K., Domino, M., Doyle, M., Fenestor, J.,
Ferreira, P., Fitzhugh, W., Forrest, C., Gage, D., Galagan, J.,
Gardyna, S., Grant, G., Hagos, B., Heaford, A., Horton, L.,
Howland, J.C., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J.,
Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K.,
Wacdonald, P., Marquis, N., McBwan, P., McGurk, A., McKernan, K.,
McPheeters, R., Meddrim, J., Meneus, L., Moxrow, J., Naylor, J.,
Norman, C.H., O'Connor, T., O'Donnell, P., Olivar, T.M., Peterson, K.,
Pierre, N., Santos, R., Severy, P., Spencer, B., Stange-Thomann, N.,
Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J.,
Timmer, A. and Zodv, M., Viel, R., Vo, A., Wu, X., Wyman, D., Ye, W.J.,
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3 (Dases 1 to 170470)
Birren,B., Linton,L., Nusbaum,C., Lander,E., Abraham,H., A
Anderson,S., Baldwin,J., Barna,N., Bastien,V., Beda,F.,
Boguslavkiy,L., Boukhgalter,B., Brown,A., Burkett,G.,
Campopiano,A., Castle,A., Choepel,Y., Colangelo,M., Collin
Collymore,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S.
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Homo sapiens chromosome 12 clone RP11-799J2 map 12,
SEQUENCE, 31 unordered pieces.
                                                                                                                                                                                                                    On Mar 16, 2000 this sequence version replaced gi:6984437. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1.996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (24-AUG-2002) Whitehead Institute/MIT Center for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
Submitted (06-FEB-2000) Whitehead Institute/MIT Center for Genome
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1 (bases 1 to 170470)
Birren, B., Linton, L., Nusbaum, C. and Lander, E.
Homo sapiens chromosome 12, clone RP11-799J2
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                        Research, 320 Charles Street, Cambridge, MA 02141, USA
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                                 Contact: sequence_submissions@genome.
                                                                                                                                                       Center: Whitehead Institute/
                                                                                           Web site: http://www-seq.wi.mit.edu
                                                                                                                                Center code: WIBR
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                                                                   .wi.mit.edu
                                                                                                                                                              for
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WORKING DRAFT
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Allen, N.,

Research

NOTE: This is a 'working draft' sequence. It currently consists of 31 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence

as soon as it is available and the accession number will be preserved.

1396: contig

contig of 1396 bp in length gap of 100 bp contig of 1153 bp in length gap of 100 bp

gap of

100 bp

g of 2884 bp

in length

g of 2231 bp in length

g of 2850 bp in length

100 100 contig of 1928 bp in length gap of 100 bp contig of 2623 bp in length gap of 100 bp

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RESULT 24
AX474660
                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
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                                                                  S
                                                                                            US-09-214-836-2 (1-9) x AC022696 (1-170470)
                                                                                                                                                                                   score:
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114953
115053
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130005
130105
142221
142321
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32745. .35824
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170470: contig of 28150 bp in length.
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88.89%
88.89%
87.93%
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                                                                                                                        Gaps:
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Matches:
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Indels:
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8
0
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12816 15666 15766 18114 18214 21336 21436 23659 23759 27320

gap o

100 bp

of 2348 bp in length

g of 31

122 bp in length

gap of 100 bp contig of 2223 bp in length gap of 100 bp in length 100 bp in length 100 bp contig of 1624 bp in length 100 bp contig of 1624 bp in length 100 bp in length 100 bp in length 100 bp in length

gap of

g of 3601 bp

in

length

gap o

of 100 bp g of 3080 bp in length

28944 32645 32745 327745 337745 337925 339692 339692 34792 44174 44274 44274 44274 44274 44276 60106 60106 60106 60106 60106 60106 61000 70727 70827 7

gap of contig

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of 6332 bp 100 bp

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trig of 4974 bp in length of 100 bp of 5537 bp in length of 100 bp of 100 bp trig of 7443 bp in length of 100 bp of 100 bp trig of 5942 bp in length of 100 bp trig of 5942 bp in length of 100 bp trig of 5942 bp in length of 100 bp trig of 595 bp in length of 100 bp trig of 595 bp in length of 100 bp trig of 595 bp in length of 100 bp trig of 595 bp in length of 100 bp

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REFERENCE
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MMU14133
LOCUS
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KEYWORDS
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                 Nucleic Acids
95175358
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U14133
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                                                   Mouse silver mutation is caused by a single base insertion in the putative cytoplasmic domain of Pmel 17
                                                                                        Kwon, B.S., Halaban, R., Ponr
Bennett, D. and Pickard, R.T.
                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                   Mus musculus (house mouse)
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VGILLVLVAVVLASLILGIDLRSRAQFPKCHMVALTAAPASGLRARGLGENSPLLSGQ
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mol_type="genomic DNA"
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                               23 (1), 154-158 (1995)
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Search completed: August 24, Job time : 2212.5 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
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                                                                                                   LysValTrpGlyGlnTyrTrpGlnVal
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IWANNTINGGCWGGGCWGRGGQVSLKVINDGFFLVGGCGCCGPCSGKPKKSFVYVMCTWGKYW
QVLGGPVSRSSIATRHAKLGTHTMEVTVYLHRRGSQSYVPLAHASSTFTITDOVPFSVS
VSQLQALDGETKHFLRNHPLIFALQLHDPSGYLAEADLSYTWDFGDGTGTLISRALDV
THTYLESGSYTAQVULQAAIPLYGCSSSPVPGTTDSAYNFTAEAPGTTSRGGTTFKVVG
TTPGQMPTTQPSGTTVVQMPTTEVTATTSEQDHLTSAATDTLAEVSTTEGTGTTFTRP
SGTTVAQATTTEGFDASFLLFTQSSTGSISPLLDTDTIMLVKRQVPLDCTLYRYGSF
SLALDIVQGISSAEILQAVPFSEGDAFELTVSCQGGLPKEACMDISSPGCQPPAQRLC
QSVPPSPDCQLVLHQVLKGGSGTYCLNVSLADANSLAVASTQLVVPGQDGGLGQAPLL
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/protein_id="AAA69538.1"
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'clone="pmel17-10"
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chromosome="10"
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|mol_type="mRNA"
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-Q=-Cgn2 1/USPTO spool/US09214836/runat_14082003_085039_7585/app_query.fasta_1.398
-DB=N Geneseq_19Jun03 -QFMT=fastap -SUFFIX=rng -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=biosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=25
-MODEL-CCAL -OUTFMT=pco -NORM=ext -HEADS1E=500 -MINLEN=0 -MAXLEN=200000000
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-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG
-LONGLOG -LONGLOG -THREADS=1 -XGAPDP=10 -XGAPDEXT=0.5 -FGAPOP=6
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-DELEXT=7
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,

and is derived by analysis of the total score distribution.

SUMMARIES

Result

No Score Match 2172 24 3669 3669 3670 7094 174 1664976 Length 1807 15044 15046 42571 2115 2130 2130 2130 2131 2131 2131 2131 2534 16638 1881 2172 1986 1986 1986 DB AAT05466 AAL26956 ABK36650 ABK36651 AAH43500 AAS14396 AAT03760 ABL15725 ABL15724 AAC18543 AAS16448 AAS62319 ABS35349 AAK35626 ABA29188 ABA61433 ABZ16172 ABX45137 ABZ24215 AAS94313 AAS80038 AAS45525 AAT02716 AAL49163 ABK36828 DNA encoding novel DNA encoding novel Human LCE gene rel Human secreted pro Methanococcus jann Bovine EST associa Arabidopsis thalia Drosophila melanog Drosophila melanog Human foetal liver Probe #7654 for ge Human brain expres pMEL17 cDNA. Homo Human gp100 coding Plasmid C5H6gp100M Human DNA for mela Human bone marrow Probe #10029 used Human liver single Human genome-deriv Description Human Human R. marinus bacteri Human SULF2 genomi Human Human melanoma ant cDNA encoding huma Melanoma-specific Human gp100M nucle Modified gp100M en cDNA sequence #106 DNA encoding Melan Sequence encoding Murine gp100 codin MART-1 melanoma an Modified gp100M en Sequence encoding Human DNA encoding Sequence encoding DNA encoding human Human tumour antig Modified tumour-as A encoding novel A encoding novel A encoding novel SNP oligonuc cDNA encodin cardiovascul cardiovascul

ALIGNMENTS

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Key Location/Qualifiers CDS 136	Homo sapiens.	identification; tumour; gp100; ss.	Melanoma; antigen; vaccine; immunogen; primer; probe; detection;		Sequence encoding immunogenic peptide of melanoma antigen gp100.		25-JAN-1996 (first entry)		AAT05466;		AAT05466 standard; cDNA to mRNA; 36 BP.	5466	GT 1

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RESULT 2
AAL2695 2
XX AAL269 XX
AC AAL269 XX
DT 24-JAN
XX Immuno
KW Immuno
KW neurop
KW amyloi
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Best Local Similarity:
                                                                                                                                                                                                                                                                                                               Alignment
                                                                                                                                                                                                                                                                                                                                                                   Immunogenic peptides derived from the melanoma associated antigen (See AR78639-45) may be used in the production of vaccines. Nucleotide sequences encoding the immunogenic peptides may be used as primers and probes in the detection of melanoma cells. Tumour infiltrating lymphocytes capable of binding to the melanoma associated antigen can be cultured av vivo and returned to melanome particles, and when radiolabelled, they may be used to identify
        Immunosuppressive; immunostimulatory; antiinflammatory; cytostatic; neuroprotective; antimicrobial; gene therapy; vaccine; amylase; can amyloid protein; angiopoietin; apoptosis related protein; cadherin; cyclin; polymerase; oncogene; histone; kinase; colony stimulating f complement related protein; cytochrome; kinesin; cytokine; interfer
                                                                         Human SNP oligonucleotide #164
                                                                                                24-JAN-2002
                                                                                                                     AAL26956;
                                                                                                                                        AAL26956
                                                                                                                                                                                                                                                                                                                                    Sequence 36 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Melanoma associated antigen gp100
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16-FEB-1994;
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                                                                                                                                        standard;
                                                                                                                                                                                    AAGACCTGGGGCCAATACTGGCAAGTT 33
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to oligonucleotides encoding polymorphic contributes of proteins related to amylases, amyloid proteins, anglopoietin, apoptosis related proteins, cadherin, cyclin, polymerase, oncogenes, compones, kinases, colony stimulating factors, complement related proteins, cytochromes, kinesins, cytokines, interferons, interleukins, component, cytochromes, kinesins, cytokines, interferons, interleukins, component, cytokines, interferons, interleukins, component, cytokines, cytokines, interferons, interleukins, component, cytokines, interferons, interferons, component, cytokines, interferons, component, cytokines, cytokines, cytokines, interferons, interferons, cytokines, cytokines, interferons, interferons, interferons, cytokines, cytokines, interferons, interferons, interferons, cytokines, cytokines, interferons, inte
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27-DEC-2000; 2000US-0173419.
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nervous system disease; ss.
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Savine; vaccine; cancer; viral infection; HIV; hepatitis C virus; viral infection; human immunodeficieny virus; melanoma; bacterial infection; Salmonella; Legionella; parasitic infection;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a new synthetic polypeptide (I) comprising several different segments of at least one parent polypeptide linked together in a different relationship relative to their linkage in the parent polypeptide to impede, abrogate or otherwise alter at least one function associated with the parent polypeptide and for inducing an immune response against a pathogen or cancer and included are a synthetic polymeleotide encoding and a computer system for designing the synthetic polypeptides. The synthetic polypeptides and polymeleotides are referred to as a Savine. The synthetic polypeptide polymeleotides are referred to as a Savine. The synthetic polypeptides
                  08-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                 Sequence 90
                                                                                                                                                                                                                                                                                                                                                                                                                Trypanosoma, Toxoplasma and Giardia) inf sequence encodes a peptide derived from construct a savine of the invention.
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                                                  ABK36651
                                                                                 ABK36651 standard;
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                                                                                                                                                                                                                                         Sequence 90
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                                                                                                                                                                                                                                                                                                                              tumour-associated antigens (TAAs), such as GPI00 and carcinoembryonic antigen (CEA) in an animal. The method involves priming of the animal with an inducing agent such as tetanus toxoid (TT) or diphtheria toxoid (DT), subsequently followed by administration of an inducing agent antigen mixture. The method provides the enhancement or augmentation of the immune response to the antigen and/or improves a vaccination protocol by allowing use of less antigen. The immunisation of the animal with tumour-associated antigen is useful for the prophylactic or therapeutic treatment of cancer. The present DNA sequence encodes modified tumour-associated antigen, GP100 related to the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Enhancing immune response to antigen such as tumor antigen for treating cancer in an animal involves administering an inducing agent to the animal followed by administering inducing agent-antigen mixture -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumour-associated antigen; TAA; GP100 antigen; cytostatic; gene therapy; immune response; tetanus toxoid; TT; diphtheria toxoid; DT; prophylactic; vaccine; cancer; therapeutic; ds.
    AAH22098;
                               AAH22098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a method of enhancing an immune response against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Fig 1; 62pp; English.
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                             standard; cDNA; 1986 BP
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Virus; adenovirus; poxvirus; alphavirus; immune response; gp100; tumour antigen; CEA; carcinoembryonic antigen; immunostimulant; cytostatic; immunotherapy; interferon-gamma; IFN-gamma; cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      the present invention. More specifically AAB98098 to AAB98205 represent peptides derived from gp100; AAH22084 to AAH22097 and AAH22100 to AAH22106 represent primers used in the present invention; AAH22109 represents the plasmid nucleotide sequence comprising the Vaccinia virus H6 promoter and the human gp100 gene; and AAH22098 encodes the human gp100 gp100M protein given in AAB22106.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention describes an isolated and purified modified gp100 molecule (gp100M) capable of modulating an immune response in an animal gp100M has cytostatic activity and can be used in vaccine production and gene therapy. Nucleic acids and proteins of the invention are useful as vaccines for prophylactic treatment of cancer. AAH22084 to AAH22106 and AAB98098 to AAB98206 represent sequence used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; gp100; immune system; H6 promoter; Vaccinia virus; gp100M; modified gp100; vaccine; dene therenv.
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P-PSDB; AAB98206.
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07-AUG-2000; 2000US-0223325
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                                                           Modified gp100M encoding cDNA sequence SEQ ID NO:109
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Macaca fascicularis) were injected with a modified form of gp100 antigen (a) into the left inguinal lymph node or (b) subcutaneously. Both animals (c) of (a) developed a cell-mediated response (indicated by production of collection of therferon-gamma from T lymphocytes when exposed to gp100 peptides), but (c) interferon-gamma from T lymphocytes when exposed to gp100 peptides), but (c) colly 2 of 4 animals of (b) did so. Also animals in (a) produced a far (c) greater antibody response to gp100. The method is used in immunotherapy (c) of a wide range of cancers through induction of a specific immune (c) cresponse (humoral and cellular) against the tumour antigens. When administered to a lymphatic site, Ag (or (I)) induces a stronger immune (c) consistered to a lymphatic site, Ag (or (I)) induces a stronger immune (c) consistered to a lymphatic site, Ag (or (I)) induces a stronger immune (c) consistered to a lymphatic site, Ag (or (I)) induces a stronger immune (c) consistered to a lymphatic site, Ag (or (I)) induces a stronger immune (c) consistered to a lymphatic site, Ag (or (I)) induces a stronger immune (c) consistered to a lymphatic site, Ag (or (I)) induces a stronger immune (c) antigen protein given and AAB97709 represent gp100 epitopes; AAB97710 to (c) AAB97815 represent peptides derived from gp100 which stimulate interferon (c) (IFN)-gamma production; AAH20121 encodes the modified carcinoembyonic antigen (CEA) (c) protein given in AAB97817; and AAB97818 represents a CEA modified antigen (CEA) (c) protein given in AAB97817; and AAB97818 represents a CEA modified antigen (CEA) (c) protein given in AAB97817; and AAB97818 represents a CEA modified antigen (CEA) (c) protein given in AAB97817; and AAB97818 represents a CEA modified antigen (CEA) (c) protein given in AAB97817; and AAB97818 represents a CEA modified antigen (CEA) (c) protein given in AAB97817; and AAB97818 represents a CEA modified antigen (CEA) (c) protein given in AAB97818 represents a CEA modified antigen (CEA) (c) protein given in AAB97818 
                                              Sequence encoding melanoma associated antigen gpl00.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1986 BP;
Melanoma; antigen; vaccine; immunogen; primer; probe; detection;
                                                                                                                                                AAQ96055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes a method for inducing an immune response, in an animal, to a tumour antigen (Ag) comprising administering Ag, or nucleic acid (I) that encodes it, to a lymphatic site. Cynomolgus monkeys
                                                                                                 22-JAN-1996
                                                                                                                                                                                            AAQ96055 standard; cDNA to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inducing immune response to tumor antigen, useful in immunotherapy cancer, by administering the antigen to a lymphatic site -
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                                                                                                                                                                                                                                      encoding the immunogenic peptides may be used as primers and probes in the detection of melanoma cells. Tumour infiltrating lymphocytes capable of binding to the melanoma associated antigen can be
                                                                                                                                                                                    Sequence 2115
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                                                                                                                                                                                                                                                                             may be used
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16-FEB-1994;
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                                                                                                                                                                                                                                                                                            peptides derived from the melanoma associated antigen
                                                                                                                                                                                    BP; 469 A;
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94EP-0200337
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RESULT 9 ABQ76195 ID ABQ7

ABQ76195 standard; DNA; 2130 BP.

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                                                                                                                                                                                                                                                                                                                                                                                                                                   involves introducing a vector containing a nucleotide sequence encoding a chimeric immunogen comprising a protein processing signal and the target protein or its fragment. The immunogen is produced by the cells and processed so that the target protein or its fragment is presented to the patients immune system and a cellular immune response is initiated. The method and vectors can be used as a form of vaccination and could be used to generate a cellular immune response in patients to, e.g. cancerous tumours. The cellular immune response in the predominant immune response in the patient. This sequence represents a DNA fragment which encodes the human tumour antigen gp100 described in the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Generating cellular immune response in patient to target protein - comprises introducing vector with nucleotide sequence encoding immunogen comprising protein processing signal into cell of patient
Human melanoma antigen gp100 coding sequence.
                               13-DEC-2001
                                                             AAH43500;
                                                                                       AAH43500 standard;
                                                                                                                                                                                                                                                                                                                                                              Sequence 2130
                                                                                                                                                                                                                                                                                                                                                                                       invention.

Note: The information in this spec has been WO199845444 however this spec contained no s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This invention describes a novel method for generating a cellular immune response in a patient to a target protein or its fragment. The method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Column 17-18; 61pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kipps TJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-OCT-2002
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                             (first entry)
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                                                                                                                                                                                                             x ABQ76195 (1-2130)
                                                                                                                                                                                                                                                                                                                                                              484 A;
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54.00
88.89%
88.89%
93.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                     The cellular immune response is the predominant immune tient. This sequence represents a DNA fragment which tumour antigen gp100 described in the method of the
                                                                                       CDNA; 2130 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vaccine; cellular immune response; immunogen;
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RESULT 11
AAS14396
ID AAS14
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AC AAS14
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DB:
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               confer tighter binding to the MHC. These peptides are useful for inducing an immune response in a subject, where they are delivered in the context of an MHC molecule which presents the compound on the surface of an antigen presenting cell. The peptide sequences are useful as components of anti-cancer vaccines and to expand immune effector cells that are specific for cancers characterized by expression of the melanoma antigen gp100. They are useful for diagnosis and treatment of diseases such as cancer. In particular against human melanoma and for antiparticular against human melanoma and for the perfect of the second 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This sequence encodes human melanoma antigen gp100. Peptides of the invention based on the sequence of residues 209-217 of human melanoma antigen gp100, which represents the putative HLA-A2 binding domain, are designed to enhance binding to major histocompatibility complex (MHC) molecules and to enhance immunoregulatory properties relative to their natural counterparts. The mutations in the claimed peptides confer tighter binding to the MHC. These peptides are useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel synthetic compounds useful for stimulating an immune response a subject and as components of anti-cancer vaccines, are designed to enhance binding to major histocompatibility complex molecules -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Major histocompatibility complex; MHC; human; melanoma antigen; gp100; HLA-A2 binding domain; mutation; antigen presenting cell; vaccine; immune effector cell; cancer; antibody; ss.
                                                          AAS14396;
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12-DEC-2000; 2000US-255019P.
     26-MAR-2002
                                                                                                                    AAS14396 standard; cDNA; 2130 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             generating antibodies that specifically recognize and bind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 60-63; 67pp; English.
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     (first entry)
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RESULT 12
AAT03760
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                                                                                                        US-09-214-836-2 (1-9)
                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                  polynucleotides that encode these compounds, and immune effector cells that have been raised in vitro or in vivo in the presence of an antigen presenting cell (APC) that presents the compound. Such an APC may be the major histocompatibility complex (MHC) molecule. The anti-melanoma compounds are useful for inducing an immune response in a subject, by delivering the compound to the subject in the context of an MHC molecule which presents the compound on the surface of an APC. The anti-melanoma compound is delivered as a polynucleotide that encodes it. The compounds are useful to generate antibodies that specifically recognise and bind to them, for the treatment of melanoma, as components of anti-cancer vaccines, and to expand immune effector cells that are specific for cancers characterised by expression of gp100 tumour antigen, melanoma. The compounds are also useful in diagnostic methods for such diseases.

CC The present sequence encodes human melanoma antigen gp100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel anti-melanoma compound or peptide useful for inducing immune response in a subject, for treating melanoma, as components of anti-cancer vaccines and to expand immune effector cells specific for
                                                                                                                                                                                                                                                              Sequence 2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                are
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09-FEB-2001; 2001US-267877P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide sequence based on human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; anti-melanoma compound; melanoma antigen gp100; APC; MHC; immune effector cell; antigen presenting cell; anti-cancer; major histocompatibility complex; gp100 tumour antigen; cytostatic; ss
                                                                                                                                                     Match:
                                                                                                                                                                                                                  No
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rice sequence based on human melanoma antigen gpi00. Al antibodies that recognise and bind to these compounds,
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                                                                           μ.
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                                                              LysValTrpGlyGlnTyrTrpGlnVal
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/product= "Melanoma antigen gp100"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            relates to anti-melanoma
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                                                                                                      (1-2130)
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                                                                                                                                                                                                                                                            575 G; 484
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                                                                                                                                                                                                                                                            0 other;
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RESULT 13
AAT96726
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Best Local Similarity:
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          Melanoma; immunogen; cytotoxic T lymphocyte; CTL; human leukocyte antigen-A1; HLA-A1; human leukocyte antigen-A3; HLA-A3; epitope; pMEL-17; tyrosinase; vaccine; protection; ss.
                                                                                                                                                                                                                                                                                                                                                                                                        A melanoma-specific immunogen homologous with pMel-17 (AAT03760) comprises one or more CTL (cycotoxic T lymphocyte) epitopes from the group AAR82098-R82194 capable of eliciting a CTL response. The epitope AAR82098-RAB2108 are of particular interest. The immunogen can be usefor partial protection in mammals against melanoma peptides which are homologous with pMel-17 are highly potent stimulators of HLA-A2+ CTLs in several cell lines and can be used in immunotherapy or
                                                           PMEL17
                                                                                    08-APR-1998
                                                                                                                                                                                                                                                                                                                                                                    Sequence 2131 BP; 474 A; 589
                                                                                                             AAT96726
                                                                                                                                     AAT96726 standard; cDNA; 2131 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 19-20; 148pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Melanoma-specific immunogen comprises epitope(s) homologous with pMel.17 - are highly potent stimulators of HLA-A2+CTL's useful in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Melanoma; immunogen; epitope; cytotoxic T cell; lymphocyte;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1995-302688/39.
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                                                                                    (first entry)
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94US-0197399.
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                                                                                                                                                                                                                                                                                                                                                                                             immunogenic conjugates as vaccines.
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Matches:
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Homo sapiens

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Percent Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A novel melanoma specific immunogen comprises at least 1 melanoma specific cytotoxic T lymphocyte (CTL) epitope, where at least 1 of the epitopes is substantially homologous to a human leukocytantigen-A1 (HLA-A1) and HLA-A3 restricted epitope of a melanoma
        09-JAN-2002;
                              17-JUL-2002.
                                                  EP1222928-A2
                                                                                             CDS
                                                                                                                            Homo
                                                                                                                                               cytostatic;
                                                                                                                                                          Human; gp100; cancer; vaccine; melanoma; tumour-associated antigen;
                                                                                                                                                                               Human gp100 coding sequence
                                                                                                                                                                                                     29-OCT-2002
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                                                                                                                                                                                                                                                AAL49164 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                protection against melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antigen-A1 (HLA-A1) and HLA-A3 restricted epitope of a melanoma antigen, either pMEL-17, i.e. the protein encoded by present sequence, or tyrosinase. The immunogen can be used in vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Pages 30-31; 106pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Melanoma-specific immunogens of pMel-17 and vaccination for producing melanoma-specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1997-479982/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cox AL, Engelhard VH, Shabanowitz J, Skipper
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19-MAR-1996;
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        2002EP-0000185
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                                                                               /*tag=
                                                                                             12..2018
                                                                                                     Location/Qualifiers
                                                                     product= "gp100"
                                                                                                                                                 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                           475 A; 588 C;
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J, Slingluff CL;
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RESULT 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to a pharmaceutical composition which comprises a nucleic acid molecule encoding a tumour-associated antigen and at least one peptide comprising a region corresponding to a putative cytotoxic T cell, helper T cell or B cell epitope of a tumour-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pharmaceutical composition useful for treating cancer, comprises nucleic acid molecule encoding tumor associated antigen and peptide comprising a region corresponding to epitope of tumor associated
                                                                                                                                                                                                                                      Human; gp100; immune system; H6 promoter; Vaccinia virus; gp100M; modified gp100; vaccine; gene therapy; cancer; circular; cyclic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antigen and/or cells pulsed with such peptide(s).In particular, the tumour-associated antigen may be gp100. The composition is useful fit reatment of cancer, especially melanoma. The present sequence is the treatment of cancer, especially melanoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure;
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                     WPI; 2001-316326/33.
                                            Berinstein N,
                                                                                            22-OCT-1999; 99US-0160879
07-AUG-2000; 2000US-0223325
                                                                                                                              20-OCT-2000; 2000WO-CA01254
                                                                                                                                                       03-MAY-2001.
                                                                                                                                                                               WO200130847-A1
                                                                                                                                                                                                      Homo sapiens.
Vaccinia virus.
                                                                                                                                                                                                                                                                            Plasmid C5H6gp100M H6 promoted human gp100M nucleotide sequence.
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                                                                                                                                                                                                                                                                                                    (first entry)
                                            Tartaglia J,
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                                            Moingeon P,
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New isolated and purified gp100 useful for the prophylactic treatment

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Example

2; Fig

3; 89pp; English.

The present invention describes an isolated and purified modified gp100 molecule (gp100M) capable of modulating an immune response in an animal. gp100M has cytostatic activity and can be used in vaccine production and gene therapy. Nucleic acids and proteins of the invention are useful as vaccines for prophylactic treatment of cancer. AAH22084 to AAH32106 and AAH38009 to AAH38206 represent sequence used in the exemplification of the present invention. More specifically AAH38098 to AAH382105 represent primers used in the present and AAH22100 to AAH22099 represents the plasmid nucleotide sequence comprising the Vaccinia virus H6 promoter and the human gp100 gene; and AAH22098 encodes the human gp100 gene; and AAH22098 generals gp100 gene; and AAH22098 generals gp100 gene; and AAH22098 generals gp100 generals g

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                                                                                                    New synthetic polypeptides having several different segments of least one parent polypeptide linked together differently compare the linkage in the parent polypeptide, for inducing immune responsagainst a pathogen or cancer
                                Example 3; Fig 27; 364pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                        Thomson
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (AUSU)
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                                                                                                                                                                                                                                                                                                                                                                                                                        Ramshaw IA;
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                                                                                                                                                for inducing immune response
                                                                                                                                                                                ents of at compared to
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P-PSDB; AAO18862 WPI; 2002-610269/66 Moelling K,

Nawrath

Σ

Pavlovic J;

16-JAN-2001; 2001EP-0100914. 09-JAN-2002; 2002EP-0000185

VIND

ZUERICH INST MEDIZINISCHE VIROLOGIE

17-JUL-2002. EP1222928-A2

1..1881

/*tag=

/product= "gp100"

Location/Qualifiers

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CC several different segments of at least one parent polypeptide linked coparent polypeptide to impede, abrogate or otherwise alter at least one communication associated with the parent polypeptide and for inducing an actimum response against a pathogen or cancer. Also included are a commune response against a pathogen or cancer. Also included are a commune response against a pathogen or cancer. Also included are a commune response against a pathogen or cancer. Also included are a commune response against a pathogen or a cancer couseful for modulating immune responses preferably directed against a cuseful for modulating immune responses preferably directed against a colon, head and neck pancreas, prostate, stomach, bladder, kidney, bone colon, head and neck pancreas, prostate, stomach, bladder, kidney, bone colon, head and neck pancreas, prostate, stomach, bladder, kidney, bone colon, head and neck pancreas, prostate, stomach, bladder, kidney, bone compositions comprising the polypeptide may be used in the treatment or prophylaxis against viral (such as infections caused by HIV (human compositions caused by Netsetrial colons). The prostate caused by Netsetrial colons caused by Plasmodium, Schistosoma, Leishmania, colons caused by Plasmodium, colons caused by Plasmodium,
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                                                                                  encodes a
                                                                                  savine
                                                                                  protein
                                                                                  of the invention.
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Sequence 16638 BP; 3840 A; 5297 C; 3944 G; T; 0 other;

Percent Similarity:
Best Local Similarity:
Query Match:
DB:

36.7 54.00 88.89% 88.89% 93.10%

Length: Matches: Mismatches: Conservative: Indels:

2534 8 0 1 0 0

Gaps:

Score

No.:

Sequence 2534 BP; 622 A; 632 C; 657 G; 623 T; 0 other;

gp100M protein given in AAB22106.

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RESULT 17
AAL49163
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                                                                                                                                                       Mouse; gp100; cancer; vaccine; melanoma; tumour-associated antigen; cytostatic; gene; ss.
                                                                                                                                                                             Murine gp100 coding sequence.
                                                                                                                                                                                                         AAL49163;
                                                                                                                                           Mus musculus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               comprises a nucleic acid molecule encoding a tumour-associated antigen and at least one peptide comprising a region corresponding to a putative cytotoxic T cell, helper T cell or B cell epitope of a tumour-associated antigen and/or cells pulsed with such peptide(s). In particular, the tumour-associated antigen may be gp100. The composition is useful for the treatment of cancer, especially melanoma. The present sequence is the
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DNA encoding melanoma antigens recognised by T-lymphocytes -vectors, host cells and antibodies, used to detect, treat and
                                                                       WPI; 1995-382963/49.
P-PSDB; AAR84854.
                                                                                                                                              Kawakami
                                                                                                                                                                                                                                         05-APR-1995;
22-APR-1994;
                                                                                                                                                                                                                                                                                                                21-APR-1995;
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94US-0231565.
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/note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                relates to a pharmaceutical composition
                                                                                                                                           SA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
"cDNA25 melanoma
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diagnosis; prognosis;
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Best Local Similarity:
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DB:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2172
                                                                                                                                                                                                                                                                                                                                                                                                                                              05-MAY-1998;
22-APR-1994;
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diagnostic; therapeutic; vaccine; melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-DEC-2001
                                                                                                                       Example
                                                                                                                                                                   Immunogenic peptide useful in vaccines of new melanoma antigen recognised by T
                                                                                                                                                                                                                                                                                                                           Kawakami
                                                                                                                                                                                                                                                                                                                                                                                                                       05-APR-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA encoding Melanoma
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                                                                                                                                                                                                                                                                                                                                                                       (USSH ) US DEPT HEALTH & HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vivo tumour
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DB; AAU28912.
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                                                                                                                  Figure
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                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0073138.
94US-0231565.
95US-0417174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rejection;
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                                                                                                                  73pp;
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                                                                                                                       English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antigen recognised by T lymphocyte;
lanoma; in vivo tumour recognition;
                                                                                                                                                                     T lymphocytes
                                                                                                                                                                                            comprises specific
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The invention relates to a novel immunogenic peptide comprising 5-20 contiguous amino acids of new melanoma antigen recognised by T lymphocytes (WART-1). The peptide sequence contains at least one amiacid modification of MART-1. The peptide is used in diagnostic and

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          therapeutic methods as an immunogen or vaccine to prevent or treat melanoma, and for in vivo tumour recognition and rejection. AAS455:
AAS45528 represent WART-1 coding sequences, PCR primers, and relating sequences of the invention.
                                                                      Immunogenic peptides derived from the melanoma associated antigen (See AR78639-45) may be used in the production of vaccines. Nucleotide sequences encoding the immunogenic peptides may be used as primers and probes in the detection of melanoma cells. Tumour infiltrating lymphocytes capable of binding to the melanoma associated antigen can be cultured ex vivo and returned to melanoma particles, and when radiolabelled, they may be used to identify
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-DEC-1994;
16-FEB-1994;
                                                                                                                                                                                                                                                                              Claim 7; Page 26; 40pp; English.
                                                                                                                                                                                                                                                                                                                                                        Melanoma associated antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1995-284790/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Adema
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                                                    tumour deposits.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    identification;
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94EP-0200337.
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        CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CC polymecleotides are also used in diagnostics as expressed sequence tags (CC polymucleotides are also used in diagnostics as expressed sequence tags (CC iri). (II) is useful in gene therapy techniques (CC to restore normal activity of (II) or to treat disease states involving CC (II). (II) is useful for generating antibodies against it, detecting or creating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical CC imaging of sites expressing (II). (I) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations CC and to produce other types of data and products dependent on DNA and CC anino acid sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of the invention.

CC Specification, but was obtained in electronic format directly from WIPO captures and the printed of the process of the invention.
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ftp.wipo.int/pub/published_pct_sequences
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upplement; medical imaging; diagnostic; genetic disorder; ss.
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cc polypeptide (II) sequences. (I) is useful as hybridisation probes, cc polymerase chain reaction (PCR) primers, oligomers, and for chromosome cc and gene mapping, and in recombinant production of (II) The cc polymucleotides are also used in diagnostics as expressed sequence tags cc for identifying expressed genes. (I) is useful in gene therapy techniques ct orestore normal activity of (II) or to treat disease states involving cylindrical control of (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical considers involving aberrant protein expression or biological activity. The polypeptide and polymucleotide sequences have applications in cc diagnostics, forensics, gene mapping, identification of mutations cresponsible for genetic disorders or other traits to assess biodiversity amino acid sequences. AAS64197-AAS94564 represent novel human cc diagnostic coding sequences of the invention.
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23-AUG-2000; 2000US-0649167.
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                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID No 29896; 103pp; English.
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       The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical inaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polymucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations.
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23-AUG-2000; 2000US-0649167.
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rensics, gene mapping, ident genetic disorders or other

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10-OCT-2001;
15-FEB-2002;
                     The invention relates to identifying a candidate p53 pathway modulating agent that involves assaying a purified LCE (long chain fatty acyl elongase) polypeptide or nucleic acid or its functionally active fragment or derivative, with a test agent. The methods are useful for identifying a candidate p53 pathway modulating agent, modulating a p53 pathway of a cell, or a mammalian cell, diagnosing a disease in a patient, identifying a candidate branching morphogenesis modulating agent, and modulating branching morphogenesis in a mammalian cell. The diseases that can be
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Note: The sequence data for this patent did not appear in the printer specification, but was obtained in electronic format directly from was at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                          Identifying a candidate p53 pathway modulating agent fo diagnosing/treating cancer comprises detecting a test a activity of an assay system comprising a purified long elongase (LCE) polypeptide or nucleic acid
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                                                                                                                                                                                                                                                         Disclosure; Page 46-50; 69pp; English.
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; 2002US-357253P.
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lung or ovary cancer having greater than
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AAC18543
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                                 libraries. Such ESTs are not well suited for isolating cDNA sequences derived from the 5' ends of mRNAs and even in those cases where longer cDNA sequences have been obtained, the full 5' UTR is rarely included. 5' ESTs are derived from mRNAs with intact 5' ends and can therefore be used to obtain full length cDNAs and genomic DNAs. 5' ESTs are also used in diagnostic, forensic, gene therapy and chromosome mapping procedures. They are used to obtain upstream regulatory sequences and to design
                                                                                                                                        The present sequence is one of a large number of 5' ESTs derived from mRNAs encoding secreted proteins. No ORF has yet been conclusively identified within the present sequence. The 5' ESTs were prepared from total human RNAs or polyA+ RNAs derived from 30 different tissues. EST sequences usually correspond mainly to the 3' untranslated region (UTR) of the mRNA because they are often obtained from oligo-dT primed cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25% expression level. The method is useful for manufacturing a for diagnosing or treating breast, colon, lung or ovary cancer. ABZ24215-222 represent DNA sequences related to human LCE gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAC18543
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                         expression and secretion vectors.
                                                                                                                                                                                                                                                                        New nucleic acid that is a 5' expressed sequence tag (5' EST) for obtaining cDNAs and genomic DNAs that correspond to 5'ESTs and for diagnostic, forensic, gene therapy and chromosome mapping procedures
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chromosome mapping;
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-DB=Issued_Patents_NA -QFMT=fastap -SUFFIX=rni -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=biosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=25
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEARSIZE=500 -MINLENG -MAXLEN=2000000000
-USER=US09214836 @CGN 1 1 76 @runat 14082003 085041 7665 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSEBLOCK=100 -LONGLOG
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-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THRANS-100 -LONGLOG
-NO_TIMEOUT=120 -WARN_TIMEOUT=30 -THRANS-100 -THR
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PEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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     nucleic search, using frame_plus_p2n model
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/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
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US-09-073-138-26
US-09-073-138-26
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335	335	335	335	286	262	260	223	217	190	10706	5350	4143	3966	3966	2931	2271	2271	2268	2268	2268	2268	2268	2268	2268	2268	1830121	1830121	0	98844	1826	951	1664976
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-08-594-031	-594-031	-031	031-	US-08-594-031-121	-031-	-031-	US-08-594-031-116	-594-031-	031-	-411-	-08-826-134-	134-	-09-222-734-		1		US-08-910-820-8	-09-109-986-	-09-023-324-	-08-890-854-	-09-032-476-	•	•	1	US-08-890-853-1	09-64	US-09-557-884-1	528E	US-09-791-211-10	US-09-620-312D-485	09-615-192A-	US-08-916-421B-1
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ALIGNMENTS

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US-08-388-852B-9
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Patent No. 6500919
GENERAL INFORMATION:
APPLICANT: Adema, Gosse Jan; Figdor, Carl Gustav.
TITLE OF INVENTION: Melanoma associated antigenic polypeptide,
TITLE OF INVENTION: epitopes thereof and vaccine against melanoma.
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                     FILING DATE: February 15, INFORMATION FOR SEQ ID NO: 9:
ORIGINAL SOURCE:
TISSUE TYPE: 1
CELL TYPE: Me
                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 36 base pairs
                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                     MOLECULE TYPE:
HYPOTHETICAL:
                                                        ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                     STATE: Brak
                                                                                                          TYPE: nucleic acid
STRANDEDNESS: doub
TOPOLOGY: linear
                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
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an Leydenlaan 25
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                                                                                             mRNA
                                                                                                                                                                                                                                                                                 Version
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FEATURE:

NAME/KEY:

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Best Local Similarity:
Query Match:
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GENERAL INFORMATION:
                                                                                                                                                                         CURRENT APPLICATION UNMER: US/08/388,852B
FILING DATE: February 15, 1995
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 2115 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . No.:
                                                                                                                                                                                                                                                                                                                           ZIP: 6525 EX
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Adema, Gosse Jan; Figdor, Carl Gustav
ADDRESSEE: Adema Van Leydenlaan 25
                                                                                            ORIGINAL SOURCE:
                                                                                                                       HYPOTHETICAL: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Adema, Gosse Jan; Figdor, Carl Gustav.
TITLE OF INVENTION: Melanoma associated antigenic polypeptide,
TITLE OF INVENTION: epitopes thereof and vaccine against melanoma.
NUMBER OF SEQUENCES: 38
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NAME/KEY:
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LOCATION:
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                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
LOCATION:
                                                                               CELL TYPE: Melanocyte
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TOPOLOGY: li
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              NAME/KEY:
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                                                      NAME/KEY:
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Matches:
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US-09-214-836-2 (1-9) x US-09-056-105-1 (1-2130)
                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                         Alignment Scores:
Pred. No.:
                                                                                                                                                     ; LENGTH: 2130
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-056-105-1
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Best Local Similarity:
Query Match:
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                                                                                            score:
                                                                                                                                                                                                               SOFTWARE: FastSEQ for Windows Version 3. SEQ ID NO 1
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                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/09056105 Patent No. 6287569
                                                                                                                                                                                                                                                                        TITLE OF INVENTION: VACCINES WITH ENHANCED INTRACELLULAR TITLE OF INVENTION: PROCESSING FILE REFERENCE: 233/221
CURRENT APPLICATION NUMBER: US/09/056,105
CURRENT FILING DATE: 1998-04-06
EARLIER APPLICATION NUMBER: 60/043,467
                                                                                                                                                                                                                                             EARLIER FILING DATE: 1997-04-10 NUMBER OF SEQ ID NOS: 35
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NAME/KEY:
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LOCATION:
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LOCATION:
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262...264
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Indels:
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1 LysValTrpGlyGlnTyrTrpGlnVal 9

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US-08-231-565A-26
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Best Local Similarity:
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                                                                   Sequence 26, Application US/08231565A Patent No. 5874560 GENERAL INFORMATION:
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TOPOLOGY: Unk:
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US/08/231,565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 37 CITY: NEW YORK
CITY: NEW YORK
TTATE: NEW YORK
APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS AND
TITLE OF INVENTION: THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,3
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                          No.:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/0 FILING DATE: 22-APR-1994 CLASSIFICATION: 435
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5844075
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
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SYSTEM: PC-DOS/MS-DOS
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87.50%
87.50%
86.21%
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                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                    Gaps:
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US-09-214-836-2 (1-9) x US-08-231-565A-26 (1-2172)
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                             Patent No.
                                                                                                                                                                                                                                                                                                             Sequence 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: 421792
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUDPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 2172
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: ASCII
CURRENT APPLICATION DATA:
                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
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MEDIUM TYPE: FLOPPY DISK
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ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: METHODS NUMBER OF SEQUENCES: 43
                                                                                                                                                                         NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                      TITLE OF INVENTION:
CURRENT APPLICATION DATA
                                                                                                                                                                                                          TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 22-API CLASSIFICATION: 43
          COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
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                                                                                                                                 CITY: NEW YORK
                                                                                                                                              STREET:
                                                                                                 COUNTRY:
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                                                                                                                                                            ADDRESSEE: MORGAN & FINNEGAN
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                                                                                                                                               345 PARK AVENUE
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                                                                                                                                                                                                                                                    STEVEN A.
                                                                                                                                                                                                                                                                KAWAKAMI, YUTAKA; ROSENBERG,
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22-APR-1994
V. 477
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Matches:
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Best Local Similarity:
Query Match:
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US-09-007-961-26
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124U:
TELECOMMUNICATION INFORMATION:
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iENERAL INFORMATION:
APPLICANT: KAWAKAMI, YUTAKA; ROS
APPLICANT: STEVEN A.
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INFORMATION FOR SEQ ID NO:
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No.:
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SOPTWARE: ASCII
CURRENT APPLICATION DATA:
US/09/267,439
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PRIOR APPLICATION DATA:
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MEDIUM TYPE: FLOPPY DISK
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
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ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                               ITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                   CITY: NEW YORK
STATE: NEW YORK
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                                                                                                                                                                                                                                                                                                                                                    345 PARK AVENUE
                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                          IBM PC COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                 MORGAN & FINNEGAN, L.L.P.
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THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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                  2026-4124US1
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Matches:
Conservative:
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Indels:
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; TYPE: nucleotide
; STRANDEDNESS: Doubl
; TOPOLOGY: Unknown
; MOLECULE TYPE; CDNA
US-09-073-138-26
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Best Local Similarity:
Query Match:
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US-09-267-439-26
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                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: 421792
INFORMATION FOR SEQ ID NO:
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                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 2172
                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC CUMPALLUL COMPUTER: IBM PC COMPUTER: PC-DOS/MS-DOS OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII CURRENT APPLICATION DATA: US/09/073,138
                                                                                                                                                                                                                                                                                      FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
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MEDIUM TYPE: FLOPPY DISK
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LENGTH: 2172
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ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleotide
STRANDEDNESS: Double
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                                                                                                                                                                                                                                                                          CLASSIFICATION:
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                                                                                                                                                       (212) 751-6849
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                                                   Double
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Matches:
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Indels:
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RESULT 10
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Best Local Similarity:
Query Match:
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Pred. No.:
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Best Local Similarity:
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Sequence 1, Application US/08916421B Patent No. 6503729
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/388,852B FILING DATE: February 15, 1995 INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                              TOPULOUS TYPE: CDN MOLECULE TYPE: CDN HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy
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TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                        ORIGINAL SOURCE:
TISSUE TYPE: 1
CELL TYPE: Me
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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GENERAL INFORMATION:
APPLICANT: Bult et
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TITLE OF INVENTION: jannaschii
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           NAME/KEY: misc_feature
LOCATION: (231980)...(231980)
OTHER INFORMATION: n equals a
NAME/KEY: misc_feature
LOCATION: (234187)...(234187)
OTHER INFORMATION: n equals a
NAME/KEY: misc_feature
LOCATION: (234220)...(234220)
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LOCATION: (148948)..(148948)
OTHER INFORMATION: n equals a, t NAME/KEY: misc feature
LOCATION: (163385)..(163385)
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                                                                                                                                                                                                                FILE REFERENCE: CL001169
CURRENT APPLICATION NUMBER: US/09/810,347
CURRENT FILING DATE: 2001-03-19
NUMBER OF SEQ ID NOS: 6
NUMBER OF SEQ ID NOS: 6
                                                                                                                                                                                                                                                                                         APPLICANT: YE, Jane et al.
TITLE OF INVENTION: ISOLATED HUMAN ENZYME PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN ENZYME PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
                                                                                                                                                          TYPE: DNA
ORGANISM: Human
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; TYPE: DNA
; ORGANISM: Bacteriophage RM378
US-09-585-858-1
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                                                                                                                                                                                                                                                                                                                                             Patent No. 6503729
TITLE OF INVENTION: jannaschii
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                                                                                                                                                                                                                                                                                             FILE REFERENCE: PB275
CURRENT APPLICATION NUMBER: US/08/916,421B
CURRENT FILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Bult et al. TITLE OF INVENTION: Complete Genome Sequence of the Methanogenic atent No. 6503729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: 2739.1001-001
CURRENT APPLICATION NUMBER: US/09/585,858
CURRENT FILING DATE: 2000-12-18
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                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: US 60/024,428 PRIOR FILING DATE: 1996-08-22 NUMBER OF SEQ ID NOS: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
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                                                                                                                                                                                                                                 SOFTWARE:
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TYPE: DNA
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NAME/KEY: misc_feature
LOCATION: (28222) . . (28222)
OTHER INFORMATION: n equals
                                               LOCATION: (28257)..(28258)
OTHER INFORMATION: n equals
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LOCATION: (28257)..(28
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                  AME/KEY: misc_feature
OCATION: (84773)..(84
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NAME/KEY: misc feature
LOCATION: (312993)...(312993)
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LOCATION: (319226)...(319226)
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LOCATION: (559241)..(559241)
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         NAME/KEY: misc feature (1637998)..(1637998)
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LOCATION: (1603734)..(1603734)
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COATTON: (1313224)..(1313224)
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Percent Similarity:
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US-09-615-192A-240
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CURRENT FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 08/975,316
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: US 08/713,000
PRIOR FILING DATE: 1996-09-11
PRIOR APPLICATION NUMBER: US 09/169,789
PRIOR FILING DATE: 1998-10-09
NUMBER OF SEQ ID NOS: 405
SOFTWARE: FASESEQ for Windows Version 3.0
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                                                                                                                                                                                                   RESULT 15
US-09-620-312D-485/c
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                                                                                                                                                        GENERAL
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GENERAL INFORMATION:
                                                                                                                                                                     Sequence 485, Application US/09620312D Patent No. 6569662
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                                                                                                        APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Asundi, Vinod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Materials and Methods for the TITLE OF INVENTION: Modification of Plant Lignin
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                                                                             APPLICANT:
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TYPE: DNA
ORGANISM: Pinus radiata
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                                           Zhang, uz.
Zhang, reiyan
Ren, Feiyan
Then, Rui-hong
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                              Zhao, Qing A.
Wehrman, Tom
Xue, Aidong J. Yang, Yonghong
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Best Local Similarity:
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Patent No. 6448080
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SOFTWARE: pt FL_genes Version 1.0
SEQ ID NO 485
                                                                                                                                                                                                                                                                                                                         SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                               APPLICANT: Domma T. Ward
APPLICANT: Andrew T. Watt
TITLE OF INVENTION: ANTISENSE MODULATION OF WRN EXPRESSION
FILE REFERENCE: RTS-0205
CURRENT APPLICATION NUMBER: US/09/791,211
CURRENT FILING DATE: 2001-02-23
                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
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APPLICANT: John Tillinghast
APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 656962el Nucleic Acids and
TITLE OF INVENTION: Polypeptides
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                                                                                                                                                                                                                                                                                      LENGTH: 98
TYPE: DNA
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                                              LOCATION: 65469
OTHER INFORMATION: unknown
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LOCATION: 64383
OTHER INFORMATION:
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LOCATION: 24962
OTHER INFORMATION: unknown
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LOCATION: (755)..(1726)
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TYPE: DNA
ORGANISM: Homo sapiens
            NAME/KEY: unsure
                                                                                                OTHER INFORMATION: unknown
                                                                                                                  NAME/KEY: unsure LOCATION: 65468
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INFORMATION: unknown
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RESULT 18
US-09-557-884-1/c
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Best Local Similarity:
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             Sequence 1, Application US/09557884

PATENT NO. 6506581

GENERAL INFORMATION:

APPLICANT: Fleischmann et al.

TITLE OF INVENTION: The Nucleotide sequence of the Haemophilus influenzae
Thereof, and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Fraser et al.
TITLE OF INVENTION: Nucleotide Sequence of the Mycoplasma Genitalium Genome,
Patent No. 6537773
TITLE OF INVENTION: Thereof, and Uses Thereof
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CURRENT APPLICATION NUMBER: US/08/545,528D
CURRENT FILING DATE: 1995-10-19
PRIOR APPLICATION NUMBER: US 08/488,018
PRIOR FILING DATE: 1995-06-07
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SOFTWARE: PatentIn version 3.1
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ORGANISM: Mycoplasma genitalium
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OTHER INFORMATION: unknown
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NUMBER OF SEQUENCES: 1
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Matches:
Conservative:
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Matches:
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                           Sequence 1, Application US/09643990A Patent No. 6528289
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 301-309-8504
TELEPAX: 301-309-8439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 08/476,102
FILING DATE: JUN-5-1995
ATTORNEY/AGENT INFORMATION:
NAME: Michelle S. Marks
REGISTRATION NUMBER: 41,971
REFERENCE/DOCKET NUMBER: PB186P3
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             710242 CGAGTTTGGGGAAAATATTGG 710222
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MEDIUM TYPE: 3 1/2 inch diskette
COMPUTER: Dell Pentium
OPERATING SYSTEM: MS DOS v6.22
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
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ADDRESSE: Human Genome Sciences, Inc.
STREET: 9410 Key West Avenue
CITY: Rockville
STATE: MD
ZIP: 20850
COMPUTER READABLE FORM:
MEDIUM TYPE: 3 1/2 inch diskette
COMPUTER: Dell Pentium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Human Genome Sciences,
                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                           APPLICANT: Robert D. Fleischmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LysValTrpGlyGlnTyrTrp 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/09/557,884 FILING DATE: 25-Apr-2000 CLASSIFICATION: <Unknown>
                                                                                            STATE: MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: double
                                                                           COUNTRY:
                                                                                                            STREET: 9410 Key West Avenue CITY: Rockville,
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the Haemophilus influenzae
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Matches:
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Best Local Similarity:
Query Match:
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APPLICANT: Goeddel, David V.
APPLICANT: WORONICZ, John
TITLE OF INVENTION: IKK- Proteins, Nucleic Ac
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 268 BUSH STREET, SUITE 3200
CITY: SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 20
US-08-890-853-1
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/890,853
FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: 797-006-1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415,343-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Appli
Patent No. 585181
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           710242 CGAGTTTGGGGAAAATATTGG 710222
                                                                                                                                                                                                                                                                                                                                               ZIP: 94104
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FILING DATE: 1995-04-21
ATTORNEY_AGENT INFORMATION:
NAME: Kenley K. Hoover
REGISTRATION NUMBER: 40,302
REFERENCE/DOCKET NUMBER: PB186P1C1
TELECOMMUNICATION INFORMATION:
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/643,990A
FILING DATE: 23-Aug-2000
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APPLICATION NUMBER: 08/487,429
FILING DATE: 1995-06-07
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TYPE: nucleic acid
STRANDEDNESS: double
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TELEFAX: 310-309-8439
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71.43%
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Matches:
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INFORMATION FOR SEQ ID NO:

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SEQUENCE CHARACTERISTICS

ENGTH:

2268 base pairs

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Percent Similarity:
Best Local Similarity:
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 Query Match:
                                                                        Alignment Scores:
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent No. 5916760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Goedaer, During APPLICANT: Woronicz, John
TYPE OF INVENTION: IKK- Proteins, Nucleic Acids and Methods
                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: T9
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 343-4341
                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of COMPUTER: IBM PC com
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MOLECULE TYPE:
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APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA: APPLICATION NUMBER: US
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                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP STREET: 268 BUSH STREET, SUITE 3200 CITY: SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
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                                        Length:
Matches:
                           Conservative:
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                Mismatches:
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RESULT 23
US-09-197-008-1
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                                                                                                               US-09-214-836-2 (1-9) x US-09-099-124A-1 (1-2268)
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Best Local Similarity:
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Patent No. 593930
                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (415) 343-43
TELEFAX: (415) 343-4342
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,621
REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 268 BUSH STREET, SUITE 3200 CITY: SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/09/099,124A
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                                               1282 AAGGTGTGGGGCCAGGTCTGG 1302
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                                                                      1 LysValTrpGlyGlnTyrTrp 7
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                                                                                                                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                                             TYPE: CDNA
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                                                                                                                                                                                                                                                                                                            linear
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                                                                                                                                                                                                                                                                                                                           double
                                                                                                                                                            41.00
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      John
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Matches:
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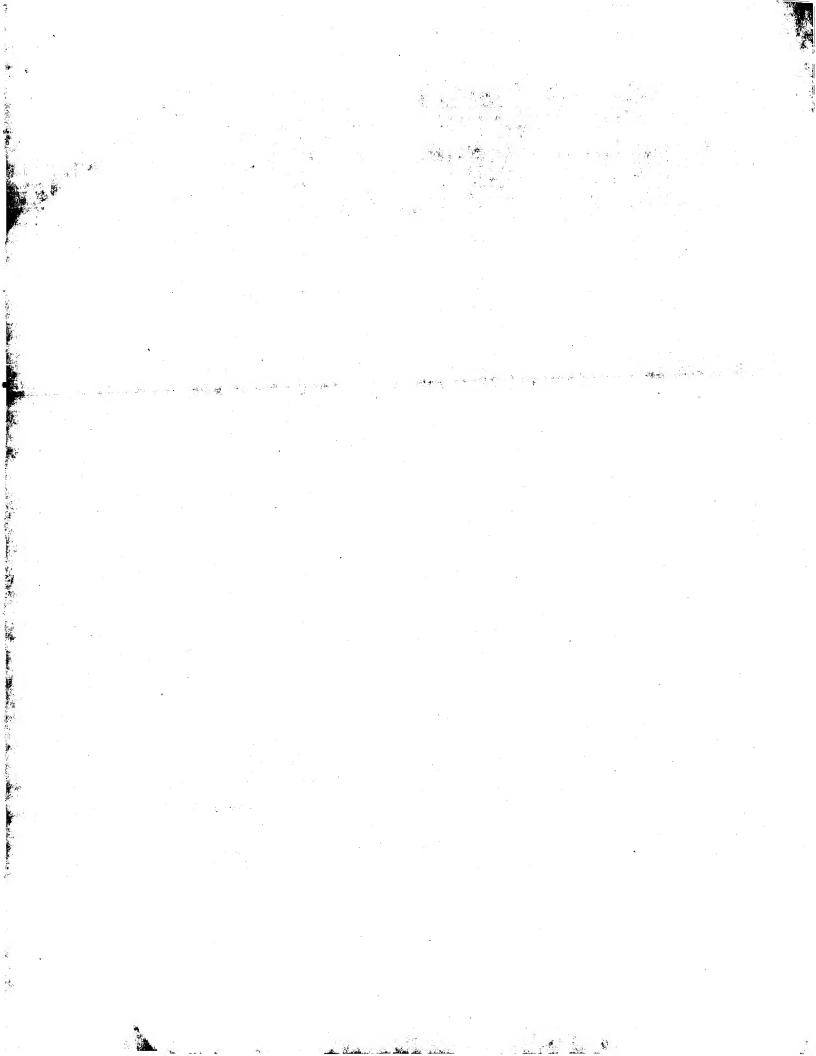
GENERAL INFORMATION:
APPLICANT: Brett P. Monia
APPLICANT: Lex M. Cowsert

Sequence 1, Application US/09197008 Patent No. 5977341

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; MOLECULE TYPE: US-09-032-476-1
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Best Local Similarity:
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                                                                                                                             APPLIANCE DATE:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
REGISTRATION NUMBER: T97-(
TELECOMMUNICATION INFORMATION:
TOTAL COMMUNICATION 143-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 623549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: RTS-0019
CURRENT APPLICATION NUMBER: US/09/197,008
CURRENT FILING DATE: 1998-11-20
NUMBER OF SEQ ID NOS: 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: ANTISENSE MODULATION OF INHIBITOR-KAPPA B KINASE-BETA EXPRESSION
                                                                                                                TELEFAX: (415) 343-43
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: CDS
LOCATION: (1)..(2268)
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ORGANISM: Homo sapiens
FEATURE:
                    TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
VOLECTOR :
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APPLICANT:
APPLICANT:
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No.:
                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
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                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLICANT: R gnier, Catherine TLE OF INVENTION: IKK-' Pro
                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
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Patent No. 623551
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INFORMATION FOR SEQ ID NO:
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NAME: OSMAN, RICHARD A
REGISTRATION UNUBER: 36,627
REFERENCE/DOCKET NUMBER: T97-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 343-4341
TELEPHAX: (415) 343-4342
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 268 BUSH STREET, SUITE 3200
CITY: SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: R gnier, Catherine
TITLE OF INVENTION: IKK-' Proteins, Nucleic Acids and Methods
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                               LENGTH: 2268 base pairs
TYPE: nucleic acid
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CLASSIFICATION: 435
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1282 AAGGTGTGGGGCCAGGTCTGG 1302
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                           LysValTrpGlyGlnTyrTrp 7
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Search completed: August 24, 2003, 04:11:04 Job time: 765 secs



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Result
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-Q=/cgn2 1/USPTO_spool/US09214836/runat_14082003_085045_7758/app_query.fasta_1.398
-DB=PublIshed_Applications_NA -QEMT=fastap -SUFFIX=rnpb -MINMATCH=0.1
-LOOPCL=0 -LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATEXIX=blosum62
-TRANS=human40.cdi -LIST=45 -DCCALIGN=200 -THR_SCORE=pct -THR_MAX=100
-THR_MIN=0 -ALIGN=25 -MODE=LOCAL -OUTFYT=pto -NORN=ext -HEARSIZE=500 -MINLEN=0
-MAXIEN=20000000000 -USER=US09214836_GCRI 1 290_Grunat_14082003_085045_7758
-NCPU=6 -ICPU=3 -NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100
-LONCLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPDP=10 -XGAPEXT=0.5
-FGAPDP=6 -FGAPEXT=7 -YGAPDP=10 -YGAPDFXT=0.5 -DELDP=6 -DELEXT=7
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Maximum DB seq length: 200000000
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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1: /cgn2_6/prodata/1/pubpna/US07_PUBCOMB.seq:*

2: /cgn2_6/prodata/1/pubpna/PCT_NEW_PUB.seq:*

3: /cgn2_6/prodata/1/pubpna/US06_NEW_PUB.seq:*

4: /cgn2_6/prodata/1/pubpna/US06_PUBCOMB.seq:*

4: /cgn2_6/prodata/1/pubpna/US07_NEW_PUB.seq:*

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7: /cgn2_6/prodata/1/pubpna/US08_NEW_PUB.seq:*

9: /cgn2_6/prodata/1/pubpna/US08_PUBCOMB.seq:*

9: /cgn2_6/prodata/1/pubpna/US08_PUBCOMB.seq:*

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13: /cgn2_6/prodata/1/pubpna/US09R_PUBCOMB.seq:*

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Match Length DB
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
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                                                                                                                                                                                                                                                    /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*
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                                             Description
Sequence 1, Appli
                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/862,260A
CURRENT FILING DATE: 2001-05-21
PRIOR APPLICATION UNMBER: 60/208,955
PRIOR FILING DATE: 2000-05-31
PRIOR APPLICATION UNMBER: 60/267,877
PRIOR FILING DATE: 2001-02-09
NUMBER OF SEQ ID NOS: 23
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 2130
                     Alignment Scores:
Pred. No.:
                                                                                            US-09-862-260A-1
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APPLICANT: Nicolette, Charles A.
TITLE OF INVENTION: THERAPEUTIC ANTI-MELANOMA COMPOUNDS
FILE REFERENCE: 126881210200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/09862260A Patent No. US20020082217A1
                                                                                                             TYPE: DNA
ORGANISM: Homo
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2 12 US-09-988-860-26627
3 US-10-027-632-26627
5 10 US-09-960-352-10302
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2 13 US-10-027-632-7570
5 10 US-09-938-842A-3977
5 13 US-10-027-632-115796
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5 13 US-10-027-632-76212
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9 US-09-864-7617-7654
10 US-09-862-830A-106
9 US-09-764-869-1790
14 US-10-091-504-1791
14 US-10-224-413-3
14 US-10-270-876-1
14 US-10-270-876-1
14 US-10-270-876-1
14 US-10-270-86-1
15 US-10-270-86-1
16 US-10-270-86-1
17 US-10-270-869-1
18 US-10-270-869-1
19 US-10-270-869-1
20 US-10-270-866-23
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13 US-10-027-632-254454
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13 US-10-027-632-1184958
13 US-10-027-632-110313
13 US-10-027-632-131880
13 US-10-027-632-131880
13 US-10-027-632-131880
13 US-10-027-632-131890
14 US-10-198-846-6249
14 US-09-925-299-33
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US-10-027-632-170393
US-09-918-995-6693
US-09-815-343-698
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  Length:
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Sequence 8, Appli
Sequence 1, Appli
Sequence 26, Appli
Sequence 26627, A
Sequence 10302, A
Sequence 7570, Ap
Sequence 3977, Ap
Sequence 115796,
Sequence 115797,
Sequence 767212, A
Sequence 767212, A
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Sequence 170393,
Sequence 6693, Ap
Sequence 698, App
Sequence 2545189,
Sequence 254455,
Sequence 254456,
Sequence 184958,
Sequence 110313,
Sequence 110313,
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Sequence 1106, App
Sequence 1190, Ap
Sequence 1791, Ap
Sequence 1791, Ap
Sequence 3, Appli
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Sequence 6249, Ap
Sequence 33, Appl
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DB:
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                                                                                                                         ; TYPE: DNA
; ORGANISM: Homo
US-10-207-655-76
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DB:
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LENGTH: 2130
TYPE: DNA
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Publication No. US20030118592A1
GENERAL INFORMATION:
                                                                                                                                                                       SEQ ID NO 76
LENGTH: 2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/812,238B
CURRENT FILING DATE: 2002-05-21
NUMBER OF SEQ ID NOS: 19
SOPTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Nicolette, Charles
TITLE OF INVENTION: THERAPEUTIC ANTI-MELANOMA COMPOUNDS
FILE REFERENCE: GZ 2094.00
                                                                                                                                                                                                                                                                  APPLICANT: Hayden-Ledbetter, Martha S.
TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
FILE REFERENCE: 390069.401C1
                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/207,655
CURRENT FILING DATE: 2002-07-25
                                                                                                                                                                                                                                                                                                   APPLICANT: Ledbetter, Jeffrey A. APPLICANT: Hayden-Ledbetter, Ma
                                                                                                                                                                                                       SOFTWARE: PatentIn version 3.0
                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 426
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NAME/KEY: CDS
LOCATION: (22)...(2004)
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Percent Similarity:
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TITLE OF INVENTION: HUWAN MONOCLONAL ANTIBODIES TO
TITLE OF INVENTION: CELLS
FILE REFERENCE: MXI-166CP
CURRENT APPLICATION NUMBER: US/10/035,637
CURRENT FILING DATE: 2001-11-07
PRIOR APPLICATION NUMBER: 09/851,614
PRIOR FILING DATE: 2001-03-08
PRIOR FILING DATE: 2001-03-08
PRIOR FILING DATE: 2000-05-08
PRIOR APPLICATION NUMBER: USSN 60/203,126
PRIOR APPLICATION NUMBER: USSN 60/230,739
PRIOR FILING DATE: 2000-09-07
PRIOR FILING DATE: 2000-09-07
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LENGTH: 2131
                                                                                                         SEQ ID NO 8
LENGTH: 23770
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CURRENT APPLICATION NUMBER: US/10/047,539
CURRENT FILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: EP 01 10 0914.9
PRIOR FILING DATE: 2001-01-16
NUMBER OF SEQ ID NOS: 13
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APPLICANT: PAVLOVIC, JOVAN
APPLICANT: NAWRATH, MICHAEL
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING
TITLE OF INVENTION: CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                     NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Deo, Yashwant M. APPLICANT: Keler, Tibor
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NAME/KEY: CDS
LOCATION: (12)..(2018)
             FEATURE:
NAME/KEY: CDS
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                                                                                       TYPE: DNA
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                                                           ORGANISM: Homo sapiens
OCATION: (16489)...(17094)
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US-10-047-539-1
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Best Local Similarity:
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                                                                                                                                                                                                                Sequence 26, Application US/09898860 Publication No. US20030144482A1 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: VOS-27
CURRENT APPLICATION NUMBER: US/10/047,539
CURRENT FILLING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: EP 01 10 0914.9
PRIOR FILING DATE: 2001-01-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: MOLLING, KARIN
APPLICANT: PAVLOVIC, JOVAN
APPLICANT: NAWRATH, MICHAEL
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING
TITLE OF INVENTION: CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn Ver. 2.1
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ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: CDS
LOCATION: (1)..(1881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
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                                                                  NUMBER OF SEQUENCES: 126
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                             TITLE OF INVENTION: MELANOMA ANTIGENS AND .THEIR USE IN DIAGNOSTIC AND
                                                                                                                                                                                                APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                460 AAGACCTGGGGAAAATACTGGCAAGTT 486
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               CITY: NEW YORK
STATE: NEW YORK
                                                   STREET: 345 PARK AVENUE
COUNTRY: USA
                                                                                                                                                                                 STEVEN A.
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Best Local Similarity:
        US-10-027-632-26627
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-214-836-2 (1-9) x US-09-898-860-26 (1-2172)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
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                                                                                                                                                                                                                                                                                                                                            Sequence 26627, Appl GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                    APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
NUMBER OF SEQ ID NOS: 325720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: 421792
INFORMATION FOR SEQ ID NO: 26:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/898,860
PILING DATE: 03-Jul-2001
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
PILING DATE: -UNIMBER: US/08/417,174
PILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/417,174
PILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
APPLICATION NUMBER: US/08/231,565
PILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL N. GRUPE: 17,241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: cDNA
SEQUENCE DESCRIPTION: SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                               498
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 LysValTrpGlyGlnTyrTrpGln 8
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COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleotide
STRANDEDNESS: Double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: (212) 758-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: Unknown
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Matches:
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US-10-027-632-7570/c
; Sequence 7570, Application US/10027632
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Best Local Similarity:
Query Match:
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; LENGTH: 215
; TYPE: DNA
; ORGANISM: Bos taurus
; OTHER INFORMATION: Clone ID: 44-LIB34-021-Q1-E1-C8
US-09-960-352-10302
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                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-214-836-2 (1-9) x US-09-960-352-10302 (1-215)
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Best Local Similarity:
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CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR FILING DATE: 2000-04-20
PRIOR FILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/193,483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
FILE REFERENCE: 1551.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
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Matches:
Conservative:
Mismatches:
Indels:
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Matches:
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Indels:
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; LENGTH: 812
; TYPE: DNA
; ORGANISM: Human
US-10-027-632-7570
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                                                                           US-09-214-836-2 (1-9) x US-09-938-842A-3977 (1-2000)
                                                                                                                                   Query Match:
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Best Local Similarity:
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US-09-938-842A-3977/c
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 3977
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SEQ ID NO 7570
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Patent No. US20020160378A1
                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/264,647
PRIOR FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/300,111
PRIOR FILING DATE: 2001-06-22
NUMBER OF SEQ ID NOS: 5379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: SCRIP1300-3
CURRENT APPLICATION NUMBER: US/09/938,842A
CURRENT FILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: US 60/227,866
PRIOR FILING DATE: 2000-08-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Wang, Xun
APPLICANT: Zhu, Tong
TITLE OF INVENTION: STRESS-REGULATED GENES OF PLANTS, TRANSGENIC PLANTS CONTAINING
TITLE OF INVENTION: SAME, AND METHODS OF USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR FILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR FILING DATE: 1999-11-23
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR FILING DATE: 1999-09-28
PRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joel
APPLICANT: Wang, Xun
APPLICANT: Zhu, Tong
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                                                                                                                                                                                                                                                                                           ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                      LENGTH:
1066
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                                  1 LysValTrpGlyGlnTyrTrpGln 8
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AAAATGTGGGGACCCTATTGGCAA 1043
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85.71%
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Gaps:
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Matches:
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Matches:
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RESULT 12 US-10-027-632-115796

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Best Local Similarity:
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; ORGANISM: Human
US-10-027-632-115796
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                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR FILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR FILING DATE: 2000-03-29
PRIOR FILING DATE: 2000-02-24
                                           SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 115797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 115797,
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GENERAL INFORMATION:
APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENERAL INFORMATION:
                                                                                                             PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR FILING DATE: 1999-11-23
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR FILING DATE: 1999-09-28
PRIOR APPLICATION NUMBER: US 60/146,002
PRIOR APPLICATION NUMBER: US 60/146,002
PRIOR FILING DATE: 1999-08-09
NUMBER: US 60/146,002
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
                                                                                              NUMBER OF SEQ ID NOS: 325720
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PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR FILING DATE: 2000-04-20
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TYPE: DNA
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Matches:
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Indels:
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Best Local Similarity:
Query Match:
US-09-864-761-7654/c
; Sequence 7654, Application US/09864761
; Patent No. US20020048763A1
; GENERAL INFORMATION:
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                                                                              RESULT 15
                                                                                                                                                                                                 US-09-214-836-2 (1-9) x US-10-027-632-76212 (1-2140405)
                                                                                                                                                                                                                                                            Query Match:
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                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
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PRIOR FILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR APPLICATION NUMBER: US 60/156,358
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TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 325720
SOFTWARE: FastSEQ for Windows Version 4.0
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PRIOR APPLICATION NUMBER: US 60/146,002
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CURRENT FILING DATE: 2002-04-30
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LOCATION: (1)...(2140405)
OTHER INFORMATION: n = A,
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APPLICANT: Penn, Sharron G.

APPLICANT: Hanzel, David K. APPLICANT: Chen, Wensheng TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY

Rank, David R. Hanzel, David K.

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Percent Similarity:
Best Local Similarity:
Query Match:
DB:
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                                                      US-09-214-836-2 (1-9) x US-09-864-761-7654 (1-591)
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                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 591
TYPE: DNA
ORGANISM: Homo sapiens
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APPLICATION NUMBER: GB 24263.6
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APPLICATION NUMBER: US 09/774,203
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CATION NUMBER: PCT/US01/00662
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N LUNG, SIGNAL = 6

N ADULT LIVER, SIGNAL = 5

N FETAL LIVER, SIGNAL = 5

N PLACENTA, SIGNAL = 3.8

N HEART, SIGNAL = 3.8

N BRAIN, SIGNAL = 3.2
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Matches:
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RESULT 16
US-09-822-830A-106/c
Query Match:
                   Percent Similarity:
Best Local Similarity:
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US-09-764-869-1790
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; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-822-830A-106
                                                                                                                                   US-09-764-869-1790
                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Rosen et al.
APPLICANT: Nucleic Acids, Proteins,
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PC007
CURRENT APPLICATION NUMBER: US/09/764,869
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                        Prior application data removed - refer to PALM or file wrapper
NUMBER OF SEQ ID NOS: 2442
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 106, Application US/09822830A Patent No. US20020142952A1 GENERAL INFORMATION:
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Patent No. US20020061521A1
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PRIOR FILING DATE: 2000-04-06
NUMBER OF SEQ ID NOS: 631
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TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING NOVEL SECRETED PROTEINS
FILE REFERENCE: GIN 6402
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                                                                                                                                                 LENGTH: 15044
TYPE: DNA
ORGANISM: Homo sapiens
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Gulukota, Kamalakar
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 Conservative: Mismatches: Indels:
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US-09-214-836-2 (1-9) x US-09-764-869-1790 (1-15044)

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US-09-764-869-1791
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Best Local Similarity:
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Best Local Similarity:
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US-10-091-504-1790
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PATENT NO. US2002061521A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and
FILE REFERENCE PC007
CURRENT APPLICATION NUMBER: US/09/764,869
CURRENT FILING DATE: 2001-01-17
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Publication No. US/20030059908A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1791
LENGTH: 15046
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SEQ ID NO 1790
LENGTH: 15044
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CURRENT FILING DATE: 2002-03-07
NUMBER OF SEQ ID NOS: 2442
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LOCATION: (9942)
OTHER INFORMATION: n
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ORGANISM: Homo sapiens
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11436 GTCTGGGGTCAGTATTGG 11453
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US-10-091-504-1791
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Best Local Similarity:
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US-10-224-413-3
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Publication No. US20030059908A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PC007C1
CURRENT APPLICATION NUMBER: US/10/091,504
CURRENT FILING DATE: 2002-03-07
                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/10224413 Publication No. US20030013167A1 GENERAL INFORMATION:
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SEQ ID NO 1791
                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/224,413
CURRENT FILING DATE: 2002-08-21
PRIOR APPLICATION NUMBER: 09/810,347
PRIOR FILING DATE: 2001-03-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: YE, Jane et al.
TITLE OF INVENTION: ISOLATED HUMAN ENZYME PROTEINS,
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN I
TITLE OF INVENTION: THEREOF
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                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Human
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LOCATION: (9942)
OTHER INFORMATION: n equals a,t,g,
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ORGANISM: Homo sapiens
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39699 AAGATTTGGGGGCAATCGTGGCAA 39722

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LENGTH: 129908
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Publication No.
                                                                                                                                                                                                                                           PRIOR FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 73
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Arnthor Aevarsson
APPLICANT: Jakob K. Kristjansson
TITLE OF INVENTION: Bacteriophage RM378 of a Thermophilic
TITLE OF INVENTION: Host Organism
FILE REFERENCE: 2739.1001-001
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PRIOR FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: 60/137,120
PRIOR FILING DATE: 1999-06-02
NUMBER OF SEQ ID NOS: 73
SOFTWARE: FastSEQ for Windows Version 4.0
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CURRENT APPLICATION NUMBER: US/10/270,875
CURRENT FILING DATE: 2002-10-11
                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/270,878
CURRENT FILING DATE: 2002-10-11
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APPLICANT: Jakob K. Kristjansson
TITLE OF INVENTION: Bacteriophage RM378 of a Thermophilic
TITLE OF INVENTION: Host Organism
                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: US/09/585,858
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APPLICANT: Gudmundur O. Hreggvidss
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ORGANISM: Bacteriophage RM378
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ORGANISM: Bacteriophage RM378
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No. US20030082741A1
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Olafur H. Fridjonsson
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Olafur H. Fridjonsson
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APPLICANT: Arnthor Aevarsson
APPLICANT: Jakob K. Kristjansson
TITLE OF INVENTION: Bacteriophage RM378 of a Thermophilic
TITLE OF INVENTION: Host Organism
FILE REFERENCE: 2739.1001-001
CURRENT APPLICATION NUMBER: US/10/270,786
CURRENT FILING DATE: 2002-10-11
PRIOR APPLICATION NUMBER: US/99/585,858
PRIOR FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: 60/137,120
PRIOR FILING DATE: 1999-06-02
NUMBER OF SEQ ID NOS: 73
SOFTWARE: FastSEQ for Windows Version 4.0
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US-10-270-710-1/c
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SEQ ID NO 1
LENGTH: 1
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Publication No. US20030087392A1
                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION
                                                                                      CURRENT APPLICATION NUMBER: US/10/270,710
CURRENT FILING DATE: 2002-10-11
PRIOR APPLICATION NUMBER: US/9/585,858
PRIOR FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: 60/137,120
PRIOR FILING DATE: 1999-06-02
                                                                                                                                                                                                                               APPLICANT: Gudmundur O. Hreggvidsson
APPLICANT: Olafur H. Fridjonsson
APPLICANT: Arnthor Aevarsson
APPLICANT: Jakob K. Kristjansson
TITLE OF INVENTION: Bacteriophage RM378 of a
TITLE OF INVENTION: Host Organism
FILE REFERENCE: 2739.1001-001
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APPLICANT: Gudmundur O. Hreggyidssc
APPLICANT: Olafur H. Fridjonsson
APPLICANT: Arnthor Aevarsson
                                             NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
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APPLICANT: Gudmundur O. Hreggvidss
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TYPE: DNA
ORGANISM: Bacteriophage RM378
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OM protein - nucleic search, using frame_plus_p2n model Copyright GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.

Sequence: Title: Perfect score: US-09-214-836-2 58 1 KVWGQYWQV 9 August 24, 2003, 01:08:28; Search time 1896.5 Seconds (without alignments) 115.339 Million cell updates/sec

Run on:

Scoring table: BLOSUM62

Xgapop 10.0 , Xgapext Ygapop 10.0 , Ygapext Fgapop 6.0 , Fgapext Delop 6.0 , Delext 0.5 7.0 7.0

22781392 seqs, 12152238056 residues

Searched:

Total number of hits satisfying chosen parameters:

45562784

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Command line parameters:

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-O_-(GGP2_1/USPTO_spool/US09214836/runat_14082003_085040_7605/app_query.fasta_1.398
-OB=EST -OFMT=fastap -SUFFIX=rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MV=0 -ALIGN=25 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=50 -MINLEN=0 -MAXLEN=200000000
-USER=US09214836 @CGN 1 1 3596 @runat 14082003 085040 7605 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NGS SCORES=0 -WAIT -DSPELOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOE=6 -DELEXT=7

Database : em em_estba:*

em_htc:*
gb_est1:*
gb_est2:*
gb_htc:*
gb_est3:* ea em_estmu:* em_estin:* em_estro:* _estpl:* estov:* esthum:* _est4:*

11: 12: 13: 14: 15: 16: 17: em_gss_pln:* em_gss_vrt:* em_gss_fun:* em_gss_mam:* em_estfun:*
em_estom:* em_gss_phg:* em_gss_vrl:* em_gss em_gss_pro:* em_gss_rod:* em_gss_hum: * _gss_inv:* est5:*

gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12			9	œ	7	6	v	4.	ω	2		No.	Result
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G7667	E40871	G77057	F68965	E27741	G76145	G76645	A38987	G76428	G76039	F97856	7680	E38809	134961	7744	A37986	G76639	G76956	E27620	9583	E38408	A39619	8968	9749	2230	9706	6137	8403	6786	4331	6207	9650	9255	BE281030	9772	0881	8051	7687	0784	0792	8916	8792	9231	084	Q67842	ID	
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ALIGNMENTS

REFERENCE	SOURCE ORGANISM	KEYWORDS	ACCESSION	DEFINITION	RESULT 1 BQ678421
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 304)	Homo sapiens (human) Homo sapiens	BQ678421.1 G1:21791100 EST.	5', mRNA sequence. BQ678421	BQ678421 304 bp mRNA linear EST 15-JUL-2002 AGENCOURT_8281395 NIH_MGC_112 Homo sapiens cDNA clone IMAGE:6258718	

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Contact: Soares, MB
Coordinated Laboratory for Computational Genomics
University of Iowa
375 Newton Road , 4156 MEBRF, Iowa City, IA 5224
Tel: 319 335 8250
Fax: 319 335 9565
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National Institutes of Health, Mammalian Gene Collection (MGC)
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                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                      Normalization and subtraction: two
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ialdo, M.F., Lennon, G. and Soares, M.B.
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/tissue_type="melanotic melanoma, cell line"
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/note="Organ: skin; Vector: pOTB7; Site_1: XhoI; Site_2:
/coRI, cDNA made by oligo-dT priming. Directionally cloned
into EcoRI/XhoI sites using the following 5' adaptor:
GGCACGAG(G). Library constructed by Ling Hong in the
laboratory of Gerald M. Rubin (University of California,
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Seq primer: M13 Reverse.
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Amgen EST Program.
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Mammalia; Eutheria; Rodentia;
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                                                               Amgen,
                                                                                             Contact: Dan Fitzpatrick
                                                                                                                              Unpublished
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Tissue Procurement: ATCC
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601282169F1 NIH_MGC_44 Homo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jnpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
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          /tissue_type="endometrium, adenocarcinoma cell line"
/lab host="DHIOB (phage resistant)"
/clone lib="NIH MCC 44"
/clone lib="NIH MCC 44"
/note="Organ: uterus; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRIXhoI sites using the following 5' adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
a 115 c 147 g 122 t
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/clone lib="W Rat hypothalamus (10464)"
/note="Vector: pSPORT1; Site_1: Sall; Site_2: Not1; W Rat
/note="Vector: pSPORT1; Site_1: Sall; Site_2: Not1; W Rat
hypothalamus adult female Wistar rat avg. Insert size 2.3
kb fraction 6 and 7"
kl 113 c 112 g 83 t 39 others
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/db_xref="taxon:10116"
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                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                       mol_type="mRNA"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                    clone="IMAGE:3603952"
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BE389161
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US-09-214-836-2 (1-9) x BE389161 (1-506)
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                                                                                                                                   No.:
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cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLCM259 row: g column: 16
High quality sequence stop: 504.
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Tissue Procurement: ATCC
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National Institutes of Health, Mammalian Gene Collection (MGC)
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1 (bases 1 to 506)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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/lab host="DH10B (phage-resistant)"
/clome lib="NIH MGC 44"
/clomed into EcoRI/XhoI sites using the following 5/
adaptor: GGCACGAG(G). Library constructed by Ling Hong
in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-CDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
20 a 116 c 148 g 122 t
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/db_xref="taxon:9606"
/clone="IMAGE:3607719"
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LysValTrpGlyGlnTyrTrpGlnVal

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85-09-214-836-2 (1-9) x BM707920 (1-506)
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Fax: 319 335 9565
Email: herro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tissue Procurement: Dr. Gregg Hageman cDNA Library preparation: Dr. M. Bento Soares, Univeristy of Iowa cDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa DNA Sequencing by: Dr. M. Bento Soares, Univeristy of Iowa Clone Distribution: Researchers may obtain clones from Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coordinated Laboratory
University of Iowa
375 Newton Road , 4156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (Dases 1 to 506)
Bonaldo, M.F., Lennon, G. and Soares, M.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seq primer: M13 Reverse
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                                                                                                                                                                                                                                       /note="Torgan: eye; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site 1: ECR I; Site 2: Not I; UI-E-CII is a normalized cDNA library containing the following tissue(s): RPE and Choroid. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site Double stranded CDNA was ligated to an ECOR I adaptor, digested with Not I, and cloned directionally into pT7T3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this library is ACCTA. This library was created for the program, Gene Discovery in the Visual System, supported by National Eye Institute (NEI)."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage="adult"
/lab_host="DH10B (Life Technologies) (T1 phage resistant)"
/clone_lib="UI-E-CI1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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Best Local Similarity:
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mRNA sequence. —
BE276871
BE276871.1 GI:9151933
                                                   BE276871 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3050793
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Tissue Procurement: ATCC
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National Institutes of Health, Mammalian Gene Collection (MGC)
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="choriocarcinoma"
/lab host="DH10B (phage-resistant)"
/clone_lib="NIH MGC_21"
/clone_lib="NIH MGC_21"
/note="Organ: placenta; Vector: pOTB7; Site_1: XhoI;
/site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/KhoI sites using the following 5' adaptor: GGCAGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
26 a 120 c 149 g 120 t
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Matches:
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BE280517
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DB:
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                                                                                                                                                                                                                                                                                                                                                                                                                                    454
                                                                            Mammalia; Eutheria; Primates; Catarrhini;
1 (Dases 1 to 531)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 LysValTrpGlyGlnTyrTrpGlnVal 9
                     Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov Tissue Procurement: ATCC
                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                        BE28051
                                                                                                                                                                                                                                                                                                                            601155392F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138863
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Tissue Procurement: ATCC/DCTD/DTP
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Clone distribution: MGC clone distribution information can be
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Library Preparation: Ling Hong/Rubin Laboratory
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/clone_lib="NIH MGC_20"
/clone_lib="NIH MGC_20"
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/db_xref="taxon:9606"
/clone="IMAGE:3050793"
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                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                        Unpublished
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National Institutes of Health; Mammalian Gene Collection (MGC)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                  found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM337 row: b column: 09
High quality sequence stop: 543.
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Site 2: ECORI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACGAG(6). Size-selected >500bp
for average insert size 1.8kb. Library constructed by
Ling Hong in the laboratory of Gerald M. Rubin (University
of California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
a 170 c 143 g 116 t
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/db_xref="taxon:9606"
/clone="IMAGE:3637544"
tissue_type="choriocarcinoma"
                                                                                   organism="Homo sapiens"
                                                                                                                                ocation/Qualifiers
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'clone_lib="NIH_MGC_21"
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RESULT 11
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Expressed sequence tag analysis of human RPE/choroid for the NEIBank Project: Over 6000 non-redundant transcripts, novel genes and splice variants
Mol. Vis. 8 (4), 205-220 (2002)
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1 (bases 1 to 577)
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                                                                                                                                                                                                                                                                                                                    Email: graeme@helix.nih.gov
Plate: 94 row: g column: 12
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                 Tel: 301 402 3452
Fax: 301 496 0078
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/clone lib="MIH MGC 21"
/clone lib="MIH MGC 21"
/note="Organ: placenta; Vector: pOTB7; Site 1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming:
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACGAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by
Ling Hong in the laboratory of Gerald M. Rubin (University
of California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
a 170 c 145 g 133 t
/clone_lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified); cs" /note="Organ: Eye; Vector: pCMVSPORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          x BE408811 (1-546)
                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                    /dev_stage="Adult"
/lab_host="EMDH10B"
                                                                                                                                                                                  tissue_type="RPE/choroid"
                                                                                                                                                                                                         clone≃"cs94g12"
                                                                                                                                                                                                                               db_xref="taxon:9606"
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1 (bases 1 to 585)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plate: LLCM106 row: n column Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
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Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
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               /tissue_type="choriocarcinoma"
/lab host="DH108 (phage-resistant)"
/clone_lib="NH108 (phage-resistant)"
/clone_lib="NH1MGC_21"
/note="Organ: placenta; Vector: pOTB7; Site_1: XhoI;
/note="Corgan: placenta; Vector: pOTB7; Site_staing,
Site_2: EcoRI; cDNA made by oligo-dT priming,
Directionally cloned into EcoRI/XhoI sites using the
following 5; adaptor: GGCACCAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by
Ling Hong in the laboratory of Gerald M. Rubin (University
of California, Berkeley) using ZAP-CDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
44 a 137 c 171 g 133 t
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                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:9606"
/clone="IMAGE:3139788"
                                                                                                                                                                                                                                                                                                                                                                          organism="Homo sapiens"
|mol_type="mRNA"
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Alignment Scores: Pred. No.:

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(Un-normalized, unamplified): cs
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Plate: 26 row: a column: 07
Seq primer: M13RP1 reverse primer (ABI).
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Tel: 301 402 3452
Fax: 301 496 0078
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wistow,G., Bernstein,S.L., Wyatt,M.K., Farris,R.N., Behal,A., Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K. Expressed sequence tag analysis of human RPE/choroid for the NEIBank Project: Over 6000 non-redundant transcripts, novel genes
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CA392552
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Mol. Vis. 8 (4), 205-220 (2002)
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                                                                                             /clone_lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs"
/note="Organ: Eye; Vector: pcMVSPORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA library in the pcMVSPORT6 vector was constructed at Life Technologies (Rockville, MD; now part of Invitrogen Corp), essentially following the protocols of the SuperScript Plasmid System (Invitrogen Corp. chtp://www.invitrogen.com/>). The library code designation was cs. For this library, cDNA inserts were cloned into the NotI/Mus sites of the vector. EST analysis was performed on the unamplified library at the NII Intramural Sequencing Center (NISC)."
                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="RPE/choroid"
/dev_stage="Adult"
/lab_host="EMDH10B"
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Primates;
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CA396509
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: graeme@helix.nih.gov
Plate: 78 row: g column: 10
Seq primer: M13RP1 reverse primer
Location/Qualifiers
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6/331, NIH, Bethesda, MD 20892-2740, USA
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1 (bases 1 to 587)
Wistow,G., Bernstein,S.L., Wyatt,M.K., Farris,R.N., Behal,A., Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K.
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                    essentially following the protocols of the SuperScript Plasmid System (Invitrogen Corp.

Antp://www.invitrogen.com/>). The library code designation was cs. For this library, cDNA inserts were cloned into the NotI/MluI sites of the vector. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."
                                                                                                                                                                                                                   /Clone lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): Cs"
/(Un-normalized, unamplified): Cs"
/(note="Organ: Bye; Vector: pCMVSPORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA library in the pCMVSPORT6 vector was constructed at Life Technologies (Rockville, MD; now part of Invitrogen Corp),
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/dev_stage="Adult"
/lab_host="EMDH10B"
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Length: Matches: Conservative:

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Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLCM1712 row: f column: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 594)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
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                                                                LysValTrpGlyGlnTyrTrpGlnVal 9
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                                                                                                                                                                                                                                                                                                     /clone="IMAGE:4858379"
/tlissue_type="melanotic melanoma, high MDR (cell line)"
/tissue_type="melanotic melanoma, high MDR (cell line)"
/lab_host="DHIOB (phage-resistant)"
/clone_lib="NIH_MGC_49"
/clone_lib="NIH_MGC_49"
/note="Organ: skin; Vector: pOTB7; Site_1: XhoI; Site_2:
ECORI; cDNA made by oligo-dT priming. DIrectionally cloned into EcoRI[XhoI sites using the following 5' adaptor:
into EcoRI[XhoI sites using the following 5' adaptor:
GCACGAG(G). Size-selected >500bp for average insert size
1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
IRT (Life Technologies). Note: this is a NIH_MGC
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                                                                                                                                                                                                                                                                                                Library.
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/db_xref="taxon:9606"
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                                                                                                                                                              DEFINITION
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US-09-214-836-2 (1-9)
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Best Local Similarity:
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EST.
1 (bases 1 to 603)
NIH-MGC http://mgc.nci.nih.gov/.
                     Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 603)
                                                                                                                                                                  BG767860
BG767860.1
                                                                                                                                                                                                                        603 bp t
602741357F1 NIH_MGC_49 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov Plate: LLCM514 row: f column: 08 High quality sequence stop: 595.
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Tissue Procurement: DCTD/DTP
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National Institutes of Health, M
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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BE743315
                                                                                              Homo sapiens
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                                                                                                                  Homo sapiens (human)
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/mol_type="mRNA"
/db_xref="taxon:9606"
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/clssue_type="adenocarcinoma cell line"
/lab host="DHI()B (phage-resistant)"
/clone_lib="NIH_MGC_9"
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Matches:
                                                Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                      cDNA clone IMAGE: 4870935
                                                                                                                                                                                                                                                               linear
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E:4870935 5',
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Query Match:
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                                                                                                                                                                       COMMENT
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                                                                                                                    Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
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                                                                                                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Mammalia; Eutheria; Primates;
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Plate: LLCM1745 row: a column: 16
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Tissue Procurement: ATCC/DCTD/DTP
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                                                                                                                                                                                           Inpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                found through the I.M.A.G.E. Consortium/LLNL
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             DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be cound through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
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Clone distribution: MGC clone distribution information can be
                                                                                cDNA Library Preparation: Ling Hong/Rubin Laboratory
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Location/Qualifiers
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/lab host="DH10B (phage resistant)"
/clone lib="NIH MCC 49"
/clone lib="NIH MCC 49"
/note="Organ: skin; Vector: pOTB7; Site 1: XhoI; Site 2:
ECORI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor:
GCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript ILRT (Life Technologies). Note: this is a NIH_MGC
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_xref="taxon:9606"
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column: 08
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BG761374
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ORIGIN
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602718257F1 NIH_MGC_49 Homo sapiens cDNA clone IMAGE:4858262 5',
mRNA sequence.
                                                                                                                                                                                                                                                               found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLCM1712 row: a column: 15 High quality sequence stop: 605.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Location/Qualifiers
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
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/clone="IMAGE:4858262"
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/lab host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_49"
/note="Organ: skin; Vector: pOTB7; Site_1: XhoI; Site_2:
/corI; cDNA made by oligo-dT priming. Directionally cloned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."

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/note="Organ: skin; Vector: pOTB7; Site 1: XhoI; Site 2:
ECORI; cDNA made by oligo-dT priming. Directionally
Cloned into ECORI/XhoI sites using the following 5;
                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                             ocation/Qualifiers
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'db_xref="taxon:9606"
'clone="IMAGE:3613927"
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into EcoRI/XhoI sites using the following 5' adaptor:

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REFERENCE
AUTHORS
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Fax: 301 496 0078
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6/331, NIH, Bethesda, I
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85 row: f column:
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                                                                                                                                 /clone_lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs"
/note="Organ: Eye; Vector: pcMvSPORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA in the company of the compan
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1 154 c
library in the pCMVSPORT6 vector was constructed at Life Technologies (Rockville, MD; now part of Invitrogen Corp) essentially following the protocols of the SuperScript
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TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                     Email: bento-soares@uiowa.edu
Tissue Procurement: Dr. Gregg Hageman
Tissue Procurement: Dr. Gregg Hageman
CDNA Library preparation: Dr. M. Bento Soares, Univeristy of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa
DNA Sequencing by: Dr. M. Bento Soares, Univeristy of Iowa
Clone Distribution: Researchers may obtain clones from Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8889548
Contact: Soares,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genome Res. 6 (9), 97044477
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tel: 319 335 8250
Fax: 319 335 9565
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1 (bases 1 to 606)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                   Genetics (www.resgen.com).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             University of Iowa
375 Newton Road , 4156 MEBRF, Iowa City,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Coordinated Laboratory for Computational Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BM722309.1 GI:19042795
                                                                                                                                                                                                                                                                                                                                                                               Seq primer: M13 Reverse
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/clone_lib="UI-E-EOO"
/note="Organ: eye; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site_1: EcoR I; Site_2: Not I; UI-E-EOO is a cDNA library containing the following tissue(s): fetal eye. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <http://www.invitrogen.com/>). The library code
designation was cs. For this library, cDNA inserts were
cloned into the NotI/MluI sites of the vector. EST
analysis was performed on the unamplified library at the
NIH Intramural Sequencing Center (NISC)."
188 c 162 g 133 t
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                                                                                                                                                                         /tissue_type="fetal eye"
/dev_stage="fetal"
/lab_host="DH10B_(Life Technologies) (T1 phage resistant)"
                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                      ocation/Qualifiers
                                                                                                                                                                                                                                                clone="UI-E-E00-ahx-c-18-0-UI"
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RESULT 22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Section on Molecular Structure and Function National Eye Institute 6/331, NIH, Bethesda, MD 20892-2740, USA Tel: 301 402 3452 Fax: 301 496 0078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CA397499 611 bp mRNA linear EST 06-NOV-2002 cs91h07.yl Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs Homo sapiens cDNA clone cs91h07
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Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ביייים אפרנים; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 611)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5', mRNA sequence. CA397499
                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: graeme@helix.nih.gov
Plate: 91 row: h column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wistow,G., Bernstein,S.L., Wyatt,M.K., Farris,R.N., Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Wistow G
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens (human)
                 /clome lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs" (rs" of inferent donor /note="forgan: Eye, Vector: pcMvSpQRT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA of total RNA and 7 ug of mRNA. A directionally cloned cDNA library in the pcMvSpQRT6 vector was constructed at Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT773-Pac vector The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this library is CGCGTATACC. This library was created for the program, Gene Discovery in the Visual System, supported by National Eye Institute (NEI)."
Technologies (Rockville, MD; now part of Invitrogen Corp)
                                                                                                                                                                                                                                                                                                                                                                          1. .611
                                                                                                                                                                                            dev_stage="Adult"
lab_host="EMDH10B"
                                                                                                                                                                                                                                             tissue_type="RPE/choroid"
                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
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REFERENCE
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High quality sequence stop: 560.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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**Chttp://www.invitrogen.com/>). The library code designation was cs. For this library, CDNA inserts were cloned into the NotI/MluI sites of the vector. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."
                                                                                                                                           /lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_44"
/clone_lib="NIH_MGC_44"
/note="Organ: uterus; Vector: pOTB7; Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of
                                                                                                                             California,
                                                                                   (Stratagene)
149 c
                                                                                                                                                                                                                                                                                                    tissue_type="endometrium, adenocarcinoma cell line"
                                                                                                                                                                                                                                                                                                                          clone="IMAGE:3603823"
                                                                                                                                                                                                                                                                                                                                            db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                     organism="Homo sapiens"
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                                                                                                                                                                                                                                                                                                                                                                     type="mRNA"
                                                                              Berkeley) using ZAP-cDNA synthesis kit and Superscript II RT (Life Technolog: 176 g 147 t
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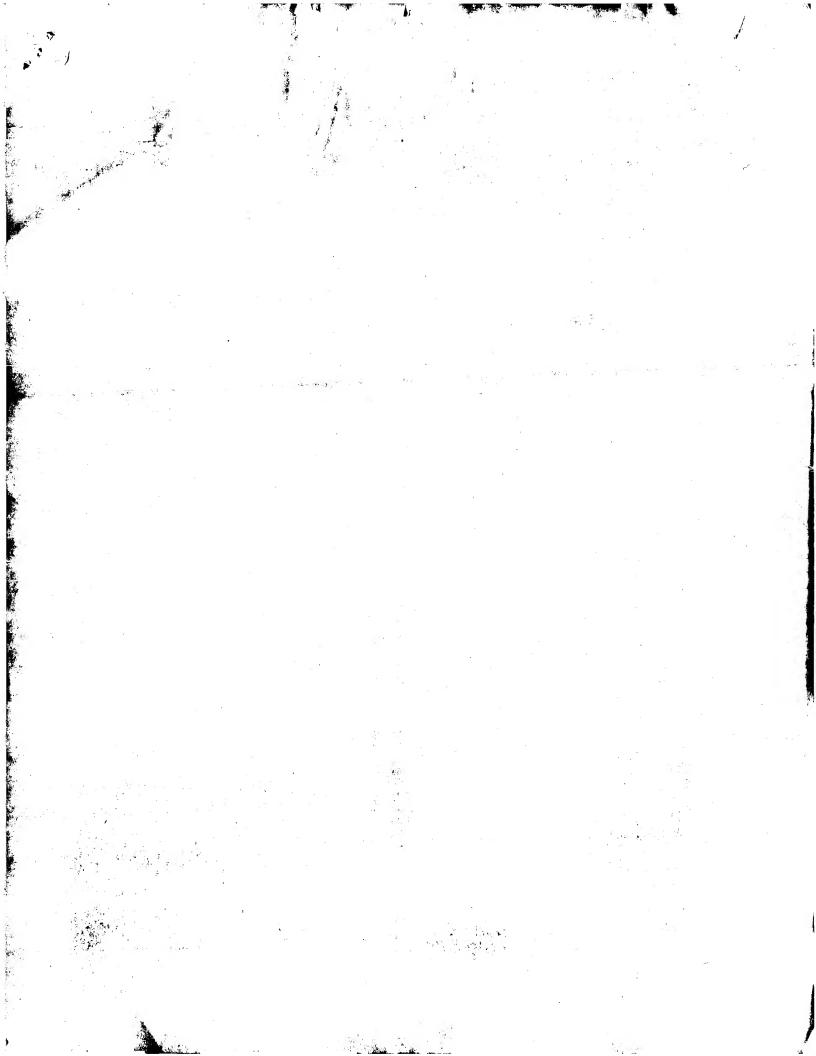
616 8

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K.
Expressed sequence tag analysis of human RPE/choroid for the
NEIBank Project: Over 6000 non-redundant transcripts, novel genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Section on Molecular Structure and Function National Eye Institute 6/331, NIH, Bethesda, MD 20892-2740, USA
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1 (Dases 1 to 619)
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Fax: 301 496 0078
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wistow,G., Bernstein,S.L., Wyatt,M.K., Farris,R.N., Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K
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primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
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. Vis. 8 (4), 205-220 (2002)
                                                                                                                                                                     126
                                                                                                                                                            /clone lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs"
/note="Organ: Eye; Vector: pcMvSpORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA library in the pcMvSpORT6 vector was constructed at Life Technologies (Rockville, MD; now part of Invitrogen Corp), essentially following the protocols of the SuperScript Plasmid System (Invitrogen Corp. <a href="http://www.invitrogen.com/">http://www.invitrogen.com/</a>). The library code designation was cs. For this library, cDNA inserts were cloned into the NotI/Mul sites of the vector. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /dev_stage="Adult"
/lab_host="EMDH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tissue_type="RPE/choroid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clone="cs75b02"
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                                                                                              1 LysValTrpGlyGlnTyrTrpGlnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov Plate: LLCM275 row: p column: 22
High quality sequence stop: 622.
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1 (bases 1 to 622)
NIH-MGC http://mgc.nci.nih.gov/.
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BE384085
BE384085.1 GI:9329450
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                          AAGACCTGGGGCCAATACTGGCAAGTT
                                                                                                                                                                                                                                                                                                                                                                   145
                                                                                                                                                                                                                                                                                                                                                       /tissue_type="melanotic melanoma"
/lab host="Melanotic melanoma"
/lab host="Melanotic melanoma"
/clone_lib="NIH_MGC_20"
/clone_lib="NIH_MGC_20"
/cloned_into_EcoRI/KhoI sites ushing the following 5'
cloned into EcoRI/KhoI sites ushing the following 5'
adaptor: GCACGAG(G). Size-selected >500bp for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
45 a 151 c 180 g 146 t
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/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                        x BE384085 (1-622)
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E:3614085 5',
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Search completed: August 24, Job time : 1898.5 secs



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Maximum Match 100%
Listing first 45 summaries
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A Geneseq_19Jun03:*

1: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
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4: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
5: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1984.DAT:*
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58
1 KVWGQYWQV 9
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Gapop 10.0 , Gapext 0.5
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	9	8	7	6	رن د	.4	ω	2	<u></u>	Result No.
	55	55	55	55	55	57	57	57	58	Score
	94.8	94.8	94.8	94.8	94.8	98.3	98.3	98.3	100.0	Query Match
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	AAU28950	AAW45782	AAW45773	AAR84801	AAR84802	AAU28952	AAW45772	AAR84803	AAW45774	ID
;	Modified qp100 G9-	Melan A/MART epito	Melanoma associate	Modified MART-1 me	Modified MART-1 me	Modified gp100 G9-	Melanoma associate	Modified MART-1 me	Melanoma associate	Description

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exemplary andigen	Human melanoma gpl	lass-I ası	00 Pmell 17	Human melanoma gp1	Human Pmel 17 (GP1	_	gp100 immunogenic	melanoma	-Pmel-117	(Pmel117)	c associa	gp100-Pmell17 anti	1		0	ğ		class I	HLA Class I motif	7	Exemplary antigeni	æ	Amino acid sequenc		Immunogenic peptid	Human melanoma Pme	Tumour antigenic p	anoma associ	epitope	Peptide 3 from gp	a-associa	0		nic per	Modified gp100 G9-

ALIGNMENTS

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$\begin{tabular}{lll} Melanoma & associated peptide analogues - useful in vaccines against \\ melanoma & \begin{tabular}{lll} $	WPI; 1998-110586/10.	Adema GJ, Figdor CG;	(ALKU) AKZO NOBEL NV.	11-001-1996; 9658-0201943.		08-JUL-1997; 97WO-EP03712.	22-JAN-1998.		WO9802538-A1.		Homo sapiens.	Synthetic.		antigen; CTL; immunogenic; viral disease.	Metastatic melanoma; peptide analogue; vaccine; cancer; diagnosis;		Melanoma associated peptide analoque #5.		22-MIN-1998 (first entry)	AAW45774;		RESULT 1 AAW45774 ID AAW45774 standard; peptide; 9 AA.	

Claim

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Figure 2; 47pp;

English

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is substituted: Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide, nucleotide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.
                            or prevention (by immunization) of melanoma. Antibodies again and its immunogenic peptides may be used in the detection and isolation of MART-1 from a sample, the detection of which is
                                                                                          G9-154
                                                                                                      AAR84783-800
                                                                                                                                    Example 5; Page 106; 184pp; English.
                                                                                                                                                                                              DNA encoding melanoma antigens recognised by T-lymphocytes -
                                                                                                                                                                                                                             WPI; 1995-382963/49.
                                                                                                                                                                                                                                                           Kawakami Y,
                                                                                                                                                                                                                                                                                                                   05-APR-1995;
22-APR-1994;
                                                                                                                                                                                                                                                                                                                                                              21-APR-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  therapy; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MART-1; M9-2; melanoma antigen recognised by T-cells; melanoma; metastatic melanoma; tumour-associated antigen; immunogenic peptide; diagnosis; prognosis; prophylaxis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified MART-1 melanoma antigen immunogenic peptide G9-154-2I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-APR-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence represents a specifically claimed example of a novel peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least a part of the following sequence, where the amino acid at position 2 or
                 indicative
                                                                                                                                                                                                                                                                                       (USSH ) US
                                                                            (see AAR84208).
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                                                                                       is an immunogenic
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                                                                                                                                                               animal against melanoma.
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                                                                                                                                                                                                                                                                                        SEC
                 of a disease
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Conservative (
                                                                      are G9-154 peptides modified to improve immunogenicity.
immunogenic peptide based on the melanoma antigen (MART-1)
B). The peptides are used in medicaments for the treatment
                                                                                                                                                                                                                                                       Rosenberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                              cells and antibodies, used to detect,
                                                                                                                                                                                                                                                                                       DEPT HEALTH
                                                                                                                                                                                                                                                                                                                   95US-0417174.
94US-0231565.
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               metastatic melanoma)
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                                                           Antibodies against
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RESULT 4

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RESULT 3
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                                                                                                                   This sequence represents a specifically claimed example of a novel peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide, nucleotide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                Sequence
                                                                                                                                                                                                                                                                                                 Claim 4; Figure 2; 47pp; English
                                                                                                                                                                                                                                                                                                                                       Melanoma
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                                                                                                                                                                                                                                                                                                                                                                                         Adema GJ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Metastatic melanoma; peptide analogue; vaccine; cancer; diagnosis; antigen; CTL; immunogenic; viral disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Melanoma associated peptide analogue #3.
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                                                                                                                                                                                                                                                                                                                                                                                                                 (ALKU ) AKZO NOBEL NV
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                                                                                                                                                                                                                                                                                                                                       associated peptide analogues - useful in vaccines against
KIWGQYWQV
                       KVWGQYWQV
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                                                 Conservative
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                                                                                                AA;
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Pred. No. 9.3e+05;
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9.3e+05;
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Matches
                                                                                        MART-1; M9-2; melanoma antigen recognised by T-cells; melanoma; metastatic melanoma; tumour-associated antigen; immunogenic peptide; diagnosis; prognosis; prophylaxis;
                          Synthetic
                                                                                                                                                                                           Modified MART-1 melanoma antigen immunogenic peptide G9-154-2M
                                                                                                                                                                                                                                                                                                    AAR84802;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     melanoma, and for in vivo tumour recognition AAU29008 represent MART-1 peptide amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel immunogenic peptide comprising 5-20 contiguous amino acids of new melanoma antiguen recognised by T lymphocytes (MART-1). The peptide sequence contains at least one aminacid modification of MART-1. The peptide is used in diagnostic and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunogenic peptide useful in vaccines comprises specific amino acids of new melanoma antigen recognised by T lymphocytes -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-595403/67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07-AUG-2001.
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                                                                         therapy; vaccine
                                                                                                                                                                                                                                                     25-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               therapeutic methods as an immunogen or vaccine to prevent or treat melanoma, and for in vivo tumour recognition and rejection. AAU2888
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05-APR-1995;
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8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of the invention
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95US-0417174.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 57; DB
Pred. No. 9.3e
1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 22;
9.3e+05;
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RESULT 6
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunogenic peptide; diagnosis; prognosis; prophylaxis; therapy; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ARR84783-800 are G9-154 peptides modified to improve immunogenicity. G9-154 is an immunogenic peptide based on the melanoma antigen (MART-1) (see ARR84208). The peptides are used in medicaments for the treatment or prevention (by immunization) of melanoma. Antibodies against MART-1
                                             WPI; 1995-382963/49.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA encoding melanoma antigens recognised by T-lymphocytes -vectors, host cells and antibodies, used to detect, treat and immunise animal against melanoma.
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                                                                                                Kawakami
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22-APR-1994;
                                                                                                                                                                                                                                                                             21-APR-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modified MART-1 melanoma antigen immunogenic peptide G9-154-2L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR84801 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 5; Page 106; 184pp; English.
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22-APR-1994;
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94US-0231565
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                                                                                             SA;
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Pred. No.
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DNA encoding melanoma antigens recognised by T-lymphocytes - also

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This sequence represents a specifically claimed example of a novel peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide, nucleotide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive cumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.
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antigen; CTL;
                                                                                                                                                                                                                                                                                                                                                                   Claim 4; Figure 2; 47pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          melanoma; peptide analogue; vaccine; cancer; diagnosis;
TL; immunogenic; viral disease.
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9.3e+05;
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Best Local
                                                                                                                           metastatic melanomas. They are characterised in that they comprise at least a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Try-Gly-Gln-Tyr-Try-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide, nucleotide sequence encoding the peptide or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive to the development of CTL-epitope based vaccines in viral disease and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Melan A/MART epitope
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                                                                                            Sequence
                                                                                                                    cancer.
                                                                                                                                                                                                                                                                This sequence is shown in the specification. The invention relates peptides, which are immunogenic with lymphocytes directed against
                                                                                                                                                                                                                                                                                                   Example 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                     11-JUL-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW45782 standard;
                                                                                                                                                                                                                                                                                                                                      Melanoma
                                                                                                                                                                                                                                                                                                                                                                                                            (ALKU ) AKZO NOBEL NV
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8; Conserv
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                                                            Similarity
                                                                                                                                                                                                                                                                                                                                      associated peptide analogues - useful in vaccines against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KVWGQYWQV
                      KVWGQYWQV 9
KMWGQYWQV
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                                                                                                                                                                                                                                                                                                   Page 29; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                    Figdor CG
                                              Conservative
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                                                                                             AA;
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                                                         94.8%;
88.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (residues 27-35) analogue
                                              Score 55; DB 19;
Pred. No. 9.3e+05;
1; Mismatches 0
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.3e+05;
                                               0,
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Best Local S
Matches
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22-APR-1994;
05-APR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a novel immunogenic peptide comprising 5-20 contiguous amino acids of new melanoma antigen recognised by T lymphocytes (MART-1). The peptide sequence contains at least one amino acid modification of MART-1. The peptide is used in diagnostic and
                                                                                                                               Human; MART-I; immunogenic; melanoma antigen recognised diagnostic; therapeutic; vaccine; melanoma; in vivo tumo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       therapeutic methods as an immunogen or vaccine to prevent or treat melanoma, and for in vivo tumour recognition and rejection. AAU2880 AAU29008 represent MART-1 peptide amino acid sequences, and related
                                                                                                                                                                                                                                                                                                              AAU28951;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 5; Column 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Immunogenic peptide useful in vaccines of new melanoma antigen recognised by :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-595403/67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; MART-I; immunogenic; melanoma antigen recognised by T lymphocyte; diagnostic; therapeutic; vaccine; melanoma; in vivo tumour recognition;
       US6270778-B1
                                                       Synthetic
                                                                                                       in vivo tumour rejection.
                                                                                                                                                                                                       Modified gp100 G9-154 peptide #2.
                                                                                                                                                                                                                                                            18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                 AAU28951 standard; Peptide; 9 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-AUG-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in vivo tumour rejection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU28950;
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8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KVWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , and for in vivo tumour recognition represent MART-1 peptide amino acid s of the invention.
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94US-0231565.
95US-0417174.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 55; DB 22;
Pred. No. 9.3e+05;
1; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
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T lymphocytes -
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and related
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  RESULT 11
AAR78644
ID AAR786
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XX Inmuun
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VX 23-AU
XX 21-DE
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XX 21-DE
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22-APR-1994;
05-APR-1995;
Melanoma associated antigen detection of tumours
                                                                                                                                                                                                                                                            21-DEC-1994;
16-FEB-1994;
                                                                             N-PSDB; AAQ96055.
                                                                                                       WPI; 1995-284790/38.
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                                                                                                                                                          Adema
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                                                                                                                                                                                                         (ALKU ) AKZO NOBEL NV
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8; Conserv
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                                                                                                                                                       Figdor CG
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Melanoma; antigen; vaccine; immunogen; primer; probe; detection; identification; tumour; gp100.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a novel immunogenic peptide comprising contiguous amino acids of new melanoma antigen recognised by T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Immunogenic peptide of melanoma associated antigen gp100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunogenic peptide useful in vaccines comprises specific amino acids of new melanoma antigen recognised by T lymphocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5; Column 54; 73pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard; Protein; 9 AA
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94US-0231565.
95US-0417174.
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94EP-0200337.
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gp100
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Pred. No.
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. 9.3e+05;
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    vaccines
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RESULT 12
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Matches 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                 The peptide epitope AAW77119-W77138 were created for human tumour-specific cytotoxic T lymphocyte response. These peptides are are cysteine- depleted mutants of a native disease-specific CTL epitope. The cysteine- depleted CTL epitopes elicit a stronger or more specific CTL response than the native epitope. The epitopes can be used in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (See AAR78639-45) may be used in the production of vaccines. Nucleotide sequences encoding the immunogenic peptides may be us as primers and probes in the detection of melanoma cells. Tumous infiltrating lymphocytes capable of binding to the melanoma associated antigen can be cultured ex vivo and returned to melan particles, and when radiolabelled, they may be used to identify
                                                                               cross-reactive epitope.
                                                                                            response than the native epitope. The epitopes can be used in a disease-specific immunogen to protect a mammal against disease in particular melanomas. The peptides may also be used to screen a sample for the presence of an antigen with the same epitope, or with a different
                                                                                                                                                                                                                 Disclosure; Page 27; 93pp; English.
                                                                                                                                                                                                                                                                                  WPI; 1998-437388/37
                                                                                                                                                                                                                                                                                                             Engelhard VH,
                                                                                                                                                                                                                                                                                                                                                                  30-JAN-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gp100/Pmel17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW77119;
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                                                                                                                                                                                                                                                                                                                                        (UYVI-)
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(See AAR78639-45) may
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l Similarity
8; Conserv
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                                                                                                                                                                                                                                                                                                                                        UNIV VIRGINIA PATENT FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KTWGQYWQV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page
                                                      ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic peptide epitope
                                                     Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31; 40pp; English.
                                                                                                                                                                                                                                                                                                             Hunt DF,
                                                                                                                                                                                                                                                                                                                                                                  97US-0037781
                                                                                                                                                                                                                                                                                                                                                                                           98WO-US01592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93.1%;
             93.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      derived from
                                                                                                                                                                                                                                                                                                             Kittlesen D,
                                                                                                                                                                                                                                          - comprises disease specific cytotoxic T elicit melanoma specific CTL response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 54; DB
Pred. No. 9.3e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
 ٥,
             Score 54;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the melanoma associated antigen
                                                                                                                                                                                                                                                                                                             Slingluff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 16;
                           DB 19;
               .3e+05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   returned to melanoma
                         Length 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 9;
 Indels
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1 KVWGQYWQV 9

Best Loc Matches Query Match

Local

Similarity 8; Conserv

Conservative

0,

93.1%; 88.9%;

Score 54; | Pred. No. 9 Mismatches

DB 19; .3e+05;

Length 9; Indels

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Gaps

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Sequence

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                                                                                            CC microparticle preparation (MP) has been developed, consisting of CC microparticles having a diameter of less than 100 mu m. The MP CC comprises: (a) a polymeric matrix (PM) consisting of one or more CC comprises: (a) a polymeric matrix (PM) consisting of one or more CC (b) an expression vector selected from RNA molecules (at least 50% of CC which are closed circles) or circular plasmid DNA (at least 50% of which are closed circles) or circular plasmid DNA (at least 50% of which are suppreceded). Also described is a MP of at most 20 microns in CC diameter, comprising: (a) a PM; and (b) a NAM comprising an expression CC control sequence operatively linked to a coding sequence, where the CC coding sequence encodes an expression product selected from: (l) a CC polypeptide at least 7 amino acids in length, having a sequence identical to the sequence of: (l) a fragment of a naturally-occurring mammalian CC to the sequence of: (i) a fragment of a naturally-occurring protein from an CC infectious agent which infects a mammal; (2) a peptide having a length CC and (3) the polypeptide or the peptide linked to a trafficking sequence. AAM69763 to AAW69765, and AAW78793 to AAW78897 are peptide fragments for the delivery of foolympials into the present invention. The MPS are highly effective vehicles for the delivery of foolympials into the present invention. The MPS are highly effective vehicles for the delivery of foolympials into the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Microparticle; delivery; polymeric matrix; autoantigen; tumour antigen; class II associated peptide; pathogen; gene therapy; genetic disease; infection; downregulation; immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-JAN-1998;
22-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW78850;
                                                         the delivery of polynucleotides into phagocytic cells. They can be used for gene therapy, e.g. for treating genetic diseases, infections or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 10; 101pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New preparations of microparticles - comprising a synthetic polymer matrix and nucleic acid comprising an expression vector for use in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1998-427556/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Curley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9831398-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PMEL 17 (GP100) protein fragment 154-162.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW78850 standard; peptide; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (PANG-) PANGAEA PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ŋ,
                                          or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KTWGQYWQV
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                                        for downregulating an immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hedley ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0003253.
97US-0787547.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Langer RS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lunsford LB
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KTWGQYWQV

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RESULT 14
AAW70010
ID AAW70
XX AAW70
XX AAW70
XX AW70
XX Cytot
KW Cytot
KW Cytot
KW cytot
KW cytot
KW cytot
KW synth
OS Synth
OS Homo
XX Ford
PD 06-AL
XX AW70
XX AW70
XX AW70
PD 06-AL
XX AW71
XX AW70
PD 06-AL
X
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                                                        8
                                                                                                                                                                                                                                                                                                                                 vitro. The method comprises contacting immunogenic peptides from an C antigen that binds class I major histocompatibility complex (MHC) C molecules with antigen presenting cells (APCs) pretreated with CC pretreatment growth factors, and incubating the APCs with purified CD8 CC cells in the presence of at least 2 incubation growth factors, thereby CC producing antigen-specific CTLs. A method for specifically killing CC target cells in a human patient is also provided which comprises CC obtaining a fluid sample containing CTLs from a patient, contacting the CC target cells with APCs pretreated with pre-treatment growth CC factors, where the APCs comprise class I MHC molecules. The pretreated CC APCs are incubated with the cytotoxic growth a carrier to form a composition. CC The composition can then be administered to the patient. The activated CTLs can be used for treating cancers, immune disorders, viral confictions, ANDS, hepatitis, bacterial infection, fungal infection,
                                                                                                                               Matches
                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   melanoma-associated antigen gp100 that can bind to a human leukocyte antigen (HLA), HLA-A2.1. The peptides are used to exemplify the method of invention of producing antigen-specific cytotoxic T cells (CTLs) in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Production of antigen-specific cytotoxic T cells - by incubating immunogenic peptide(s) from antigen that binds class I major histocompatibility complex molecules with pre-treated antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human leukocyte antigen; HLA; tumour associated antigen; cancer; antigen presenting cell; APC; immunogenic peptide; immune disorder; viral infection; AIDS; hepatitis; bacterial infection; malaria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequences shown in AAW70010 to AAW70026 represent peptides derived from melanoma-associated antigen gp100 that can bind to a human leukocyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 4; Page 62; 104pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          presenting cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-437445/37.
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                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-JAN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cytotoxic T lymphocyte; CTL; major histocompatibility complex; MHC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Melanoma-associated antigen gp100 derived HLA-A2.1 binding peptide 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-OCT-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (EPIM-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9833888-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens
                                                                                                                           Similarity
8; Conserv
                                                                                                                                                                                                                                                                                                                       or tuberculosis.
                                                               KVWGQYWQV 9
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                                                                                                                                                                                                                                                           φ
                                                                                                                               Conservative
                                                                                                                                                                                                                                                           AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sidney
                                                                                                                                                      93.1%;
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                                                                                                                           0,
                                                                                                                                                      Score 54; DB 19;
Pred. No. 9.3e+05;
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                                                                                                                               Mismatches
                                                                                                                                                                                 Length 9;
                                                                                                                           Indels
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                                                                                                                           Gaps
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ARMSULT 15
ARMS 4598
ARMS 44598
ARC ARMS 4
AC 
                                                                                                                                                                                                                                                                                                                  RESULT 16
AAW42536
CXXXXXXXXXXX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The peptides AAWS4559-W54809 are examples of peptides to which at least 1 (preferably 2) mannose can be attached to increase their uptake as antigens by antigen-presenting cells. Uptake of agonist mannosylated peptides will increase the T cell response, whereas uptake of antagonist peptides blocks the T cell response. Blocking binding of immunogenic autoantigens can be used in treatment of type I diabetes, rheumatoid arrthritis, graft rejection etc., also to induce T-cell non-
Synthetic
                                            Metastatic melanoma; peptide analogue; vaccine; cancer; antigen; CTL; immunogenic; viral disease; gp 100; Melan
                                                                                                                                                                                                                                                                                         AAW42536 standard; peptide; 9 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    e.g. vaccines against viral infection(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW54598 standard; peptide;
                                                                                                                                Gp 100
                                                                                                                                                                                    22-JUN-1998
                                                                                                                                                                                                                                      AAW42536
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1998-230631/20.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-SEP-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-SEP-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mannose;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide 3 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Increasing residue(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   responsiveness.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYLE-) RIJKSUNIV LEIDEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 parasites.
                                                                                                                                epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 KVWGQYWQV 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antigen; antigen-presenting cell; mannosylated peptide; T cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                uptake and presentation of antigen(s) - by to antigen for increasing T cell response,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Koning
                                                                                                                                (residues 154-162) analogue #2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96EP-0202701.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vaccines containing mannosylated antigen are used to infections by, e.g. bacteria, viruses, fungi, helmin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ŧ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 54; DB 19;
Pred. No. 9.3e+05;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                adding
useful
                                                  diagnosis;
A/MART-1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptides, which are immunogenic with lymphocytes directed against metastatic melanomas. They are characterised in that they comprise at least a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide, nucleotide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive to the development of CTL-epitope based vaccines in viral disease and
                                 11-JUL-1996;
                                                        08-JUL-1997;
                                                                                  22-JAN-1998
                                                                                                          WO9802538-A1
                                                                                                                                 Homo sapiens
                                                                                                                                               Synthetic.
                                                                                                                                                                     antigen;
                                                                                                                                                                                   Metastatic
                                                                                                                                                                                                         Melanoma associated peptide analogue #1.
                                                                                                                                                                                                                                   22-JUN-1998
                                                                                                                                                                                                                                                            AAW45770;
                                                                                                                                                                                                                                                                                  AAW45770 standard; peptide; 9 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Page 28; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Melanoma associated peptide analogues - useful in vaccines against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-110586/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Adema GJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-JUL-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-JAN-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9802538-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
           (ALKU ) AKZO NOBEL NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence is shown in the specification. The invention relates to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ALKU ) AKZO NOBEL NV.
                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                         Н
                                                                                                                                                                                                                                                                                                                                                                                               Similarity
8; Conserv
                                                                                                                                                                    CTL;
                                                                                                                                                                                                                                                                                                                                                                      KVWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Figdor CG;
                                                                                                                                                                     melanoma; peptide analogue; vaccine; cancer; diagnosis;
TL; immunogenic; viral disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                  (first entry)
                                 96EP-0201945
                                                          97WO-EP03712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96EP-0201945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97WO-EP03712
                                                                                                                                                                                                                                                                                                                                                                                                         93.1%;
                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                               Score 54; DB Pred. No. 9.3e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                         9.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                       DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                   Length 9;
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RESULT 18
AAY49663
X PN X SX KW X DX X AC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                            15-APR-1998;
27-JUL-1998;
30-CCT-1998;
30-CCT-1998;
                                                                                                                                                                                                                                                                                                                                                            Human; sdph3.10; SAGE; sdp3.8; HAGE; sdp3.5; TRAP; sarcoma; tumour rejection antigen precursor; tumour associated nucleic carcinoma; cancer; immune response; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          is substituted: Lys-Thr-Trp-Gly-Gly-Tyr-Trp-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide, nucleotide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.
                                                                                                                                                                                                                                                                                                                                                           carcinoma; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                Tumour antigenic peptide SEQ ID NO:30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This sequence represents a specifically claimed example of a novel peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least a part of the following sequence, where the amino acid at position 2 or
                                                  diagnosing,
                                                                                            WPI; 1999-620430/53.
                                                                                                                      Martelange V,
                                                                                                                                                                                                                                                   14-APR-1999;
                                                                                                                                                                                                                                                                           21-OCT-1999
                                                                                                                                                                                                                                                                                                       WO9953061-A2
                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                               14-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY49663 standard; peptide; 9 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Figure 1; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-110586/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adema GJ,
                                                                                                                                                  (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 KVWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   associated peptide analogues - useful in vaccines against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Figdor CG
                                                 acid encoding e.g. treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                            98US-0060706.
98US-0122989.
98US-0183706.
98US-0183789.
                                                                                                                     De Smet C,
                                                                                                                                                                                                                                                   99WO-US08163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93.1%;
                                                 sarcoma-associated gene products,
and preventing cancer -
                                                                                                                      Boon-Falleur
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 54; I
Pred. No. 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 9;
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                                                                 useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                            acid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                 for
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The present invention describes sarcoma-associated gene products (I).

Disclosure;

Page

25; 93pp; English

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RESULT 19
AAY53524
ID AAY53
XX AAY53
XX Lipop
RW Homon
XX Homo

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Best Local S
Matches 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lipopeptide; epitope; cytotoxic T lymphocyte; CTL; lipid; spacer; electrical charge; hydrophilicity; vaccine; immune response; HIV; human immunodeficiency virus; hepatitis B virus; papilloma virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (INRM )
(CNRS )
(INSP )
                                                                                                                                                                                                   New lipopeptide containing lipid regions and two epitopes, all separated by peptide spacers that impart hydrophilicity, useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-OCT-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  melanoma; malaria; parasite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human melanoma
                                                                                                   Disclosure; Page 24; 35pp; French
                                                                                                                                                                                                                                                                                                                                                                                        Le Gal FA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FR2776926-A1
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                                                                                                                                                                                                                                                                                                                     WPI; 1999-583113/50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunoassays, also for delivering drugs, toxins, imaging agents etc. to [1]-expressing cells. AAY49637 to AAY49670 represent exemplary tumour antigenic peptides given in the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          INSERM INST NAT SANTE & CNRS CENT NAT RECH SCI. INST PASTEUR LILLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KTWGQYWQV 9
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                                                                                                                                                                                                                                                                                                                                                                                        Guillet JG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                φ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98FR-0004323
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (gp100) (aa 154-162) binds HLA-A2
                                                                                                                                                                                                                                                                                                                                                                                        Gahery SH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 54; DB Pred. No. 9.3e 0; Mismatches
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No. 9.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                        Gras MH,
                                                                                                                                                                                                                                                                                                                                                                                    Melnyk O,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 9;
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The invention relates to the generation of a lipopeptide comprising at least one auxiliary T epitope, at least one cytotoxic T lymphocyte (CTL)

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RESULT 20
AAY47616
ID AAY477
AC AAY47
AC AAY47
AC AAY47
AC Inmun
XX Inmun
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Best Local (
AAY45390 to AAY48214 represent specifically claimed immunogenic peptides having a human major histocompatibility complex (MHC) Class I (also known as human leukocyte antigen (HLA)) binding motif. The immunogenic peptides can bind to a specific HLA allele (i.e. HLA-A subtypes HLA-A2.1, A1, A3.2 or A24.1 or HLA-B or C) and induce a cytotoxic T cell response against the antigen from which the peptide is derived. Cytotoxic T lymphocytes (CTLs) which destroy antigen-bearing cells are normally induced by an antigen in the form of a peptide fragment bound to a HLA molecule, rather than the intact foreign antigen itself, and are particularly important in tumour rejection and in fighting viral infections. The peptides are therefore useful therapeutically tutreat or prevent viral infections and cancers in mammals (especially humans) e.g. prostate cancer, hepatitis B and C, AIDS, and renal carcinoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               epitope and at least one lipid residue with (i) the epitopes and lipid portion and (ii) the epitopes, being separated independently by peptide spacers. These spacers comprise sequences of amino acids which carry an overall electrical charge in neutral media to ensure that the lipopeptide is hydrophilic. The peptides AAY53301-Y53549 represents examples of peptide epitopes used to generate the lipopeptides. These ar used in therapeutic or prophylactic compositions and vaccines to induce specific immune responses against human immunodeficiency, hepatitis B or papilloma viruses; p53 of melanoma or the malaria parasite.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human leukocyte antigen; binding; immunogenic; glycoprotein; MHC; HLA; immune response; T cell activation; major histocompatibility complex; cytotoxic T lymphocyte; CTL; tumour rejection; viral infection; cancer; prostate cancer; hepatitis B; hepatitis C; AIDS; renal carcinoma; vaccine; immunisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sette A,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immunogenic peptides with HLA binding motif, useful in treatment diagnosis of cancers and viral diseases -
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8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 116; 150pp; English.
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RESULT 21
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        expression vector (EVI) for delivering a heterologous protein into a eukaryotic cell, comprising in the 5'-3' direction; (3) a Yersinia or mutant Yersinia strain for delivering a heterologous protein into a eukaryotic cell, comprising contacting the terologous protein into a eukaryotic cell, comprising contacting the cell with a Y1 transformed with the above vector (Y1-EV1); (4) a method for delivering a heterologous protein into a eukaryotic cell, comprising contacting the cell with a Y1 transformed with the above vector (Y1-EV1); (5) a method for inducing an immune response specific for a heterologous protein; (6) a method for inducing a cytotoxic T-lymphocyte (CTL) response specific for a heterologous protein; (7) a method for determining the efficacy of an antigen vaccination regimen in a subject. Y1 is used to treat a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancer, or used to treat chronic or acute conditions. They are also useful diagnostically, and can be used to induce a cytotoxic T cell response, by contacting a cytotoxic T cell with the peptide e.g. to produce CTLs ex vivo for infusion back into a patient. The polynucleotides encoding the immunogenic peptides are also useful therapeutically and for immunisation as above.
                                                                                                                                                                                               This invention describes a novel mutant Yersinia (Y1) strain, computation(s) in effector-encoding gene(s) and deficient in the proc of functional effector protein(s). The invention describes (1) a quintuple mutant Yersinia strain, having the designation Yersinia enterocolitica yopEHOMP or Yersinia pseudotuberculosis yopEHAOJ;
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 pathological disorder,
                                                                                                                                                                                                                                                                                                     Example 1 ; Page 71; 80pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                       (BOON/)
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                                                                               lipopeptide that has a peptide part derived from mammalian interferon gamma (IFNg) and one or more lipophilic parts comprising a linear or branched, (un) saturated 4-20C hydrocarbyl chain or a steroid. The lipopeptide mimics the activity of IFNg. Compositions comprising the lipopeptide are used to treat or prevent any condition that responds to IFNg, and as adjuvant for vaccines (particularly those directed against tumors, viral or parasitic infections), to stimulate or (re)orient the immune response between types 1 and 2 cytokine profiles. Particular applications are treatment of infections (particularly viral, e.g. acquired immune deficiency syndrome, papilloma (cancer) and hepatitis, but also bacterial, fungal; parasitic or helminth); cancers (particularly of kidney, cutaneous T cells or ovary, chronic myelogenous leukemia or mesothelioma), allergy; and autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                         B epitopes recognized by corresponding antibodies. The epitopes may be used in the composition of the invention. The specification describes lipopeptide that has a peptide part derived from mammalian interferon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CD4+ epitope; B epitope; lipopeptide; interferon gamma; adjuvant; vaccine; tumor; infection; immune response; cytokine profile; acquired immune deficiency syndrome; papilloma; cancer; hepatitis; autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New lipopeptide comprising attached lipophilic groups, cancer or virus infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY40211;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY40123-Y40379 represent epitopes that are able to activate cytotoxic T lymphocytes (CD8+ epitopes), T helper cells (CD4+ epitopes), or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure;
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(INSP ) INST PASTEUR LILLE.
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Pred. No.
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                                                                                                                       The invention relates to the generation of mixed micelles or microaggregates for inducing an immune response comprise: (a) a first lipopeptide comprising at least one TIL (cytotoxic T-lymphocyte) epitope and at least one lipid unit; and (b) a second lipopeptide comprising at least one HTL (helper T-lymphocyte) epitope and at least one lipid unit different from that of the first lipopeptide. This peptide represents an example of a lipopeptide epitope used in the invention and is derived from a human melanoma protein. The immunogenic lipopeptide micelles are used in vaccines, especially against HIV, hepatitis B virus (HBV), papilloma viruses, p53, melanoma or Plasmodium falciparum malaria.
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Tartar
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         miceile; microaggregate; induction; immune response; lipopeptide; cytotoxic T-lymphocyte; epitope; lipid; helper T-lymphocyte; HTL; tetanus; toxin; vaccine; HV; hepatitis B virus; papilloma virus; melanoma; blasmodium falcinaria.
                                                                                                    Sequence
                                                                                                                                                                                                                                                                       Disclosure; Page 37; 60pp; French
                                                                                                                                                                                                                                                                                                Immunogenic lipopeptide micelles -
containing cytotoxic and helper T-l
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8; Conserv
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                                                                                                  9 AA;
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Wieruszeski JM;
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88.9%;
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Pred. No. 9.3e
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Pred. No. 9.3e+05;
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T-lymphocyte epitopes
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Tumour antigen; booster peptide; immune response modulation; allergy; immune response enhancer; tumour cell; tumour rejection antigen; leukocyte antigen-presenting molecule; autoimmune disease; allograft rejection.
                                                                                                                                                                                                                                                         AAY00715
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Luiten R, Stroobant
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                                                                                                                                     booster peptide gp100Pmel117 HLA-A2
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88.9%;
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nielemans K,
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Pred. No. 9.3e+05
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Search completed: August 14, 2003, 09:11:30 Job time : 37 secs
                                                                                                                                                                                                                                                                        This sequence represents a tumour antigen booster peptide that can be used in the method of the invention. The method is for for modulating an cimmune response in a mammal against an antigen, and comprises:

(A) inducing an immune response by: (i) administering a virus containing a nucleic acid molecule encoding the antigen or its precursor to generate an immune response; and (ii) administering at least one booster dose comprising a peptide including the antigen, in an adjuvant, in a combined amount effective to enhance the initial immune response; or (B) reducing an immune response as defined for (A) but using a combined comprising a peptide which includes the antigen, in an amount effective to reduce the initial immune response. Method (A) is used to enhance the immune response against tumour cells expressing tumour rejection antigens, and against pathogens in subjects having human cleukoyte antigens, and against pathogens in subjects having human esponse in allergy, autoimmune disease, and allograft rejection. Method (A) provides an immunisation method which, unlike prior art, is
                                                                                                                                               Query Match
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Matches 8
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                                                                                                                                                                                                                                                            not limited by the host immune response against viral vectors.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immunization methods using viruses expressing antigen for priming and booster immunizations - useful for modulating immune responses against antigen, e.g. enhancing immune response against tumour cells expressing tumour rejection antigens
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                                                                                                                                                                  93.1%;
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                                                                                                                                                                Score 54; DB 20;
Pred. No. 9.3e+05;
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re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
  of hits satisfying chosen parameters:
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                                                                                                                                                                                                                                                                                                                                                                                       Issued_Patents_AA:*
1: /cgn2_6/ptodata/1.
2: /cgn2_6/ptodata/1.
3: /cgn2_6/ptodata/1.
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length: 2000000000
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58
1 KVWGQYWQV 9
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Gapop 10.0 , Gapext 0.5
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Maximum Match 100%
Listing first 45 summaries
                                Copyright
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/BCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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US-09-267-439-68

US-09-267-439-69

US-09-073-138-68

US-09-073-138-69

US-08-787-547-61
         US-08-417-174-46
US-08-902-516-29
US-09-036-582-26
US-09-183-706-30
US-09-183-706-30
US-09-267-439-46
US-09-567-995-30
US-09-567-995-30
US-09-647-185-29
US-09-847-185-29
US-09-847-185-29
US-09-847-185-29
US-09-318-86528-22
US-09-273-138-46
US-09-574-7498-27
US-09-374-7498-27
US-09-374-74-47
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Compugen Ltd
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         Query Match
Best Local S
Matches 8
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
50	50	50	50	50	50	50	50	50	54	54	54	. 54	54	54	54	54	54
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US-09-267-439-81	US-09-267-439-80	US-09-267-439-79	US-09-267-439-78	US-08-417-174-82	US-08-417-174-81	US-08-417-174-80	US-08-417-174-79	US-08-417-174-78	US-07-891-942G-6	US-09-073-138-121	US-08-388-852B-2	US-09-267-439-121	US-08-417-174-121	US-08-388-852B-10	US-08-388-852B-20	US-09-073-138-47	US-08-388-852B-21
Sequence 81, Appl	Sequence 80, Appl	Sequence 79, Appl	Sequence 78, Appl	æ	Sequence 81, Appl	Sequence 80, Appl	•	Sequence 78, Appl	Sequence 6, Appli	Sequence 121, App	Sequence 2, Appli	Sequence 121, App	۳	Sequence 10, Appl	Sequence 20, Appl	Sequence 47, Appl	Sequence 21, Appl

ALIGNMENTS

RESULT 1
US-08-417-174-70
; Sequence 70, Application US/08417174
; Patent No. 5844075 US-08-417-174-70 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: ASCII
CURRENT APPLICATION DATA:
ADDITION NUMBER: US/08/417,174 APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
NAME: CAROL M. GRUPPI GENERAL INFORMATION:
APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
APPLICANT: STEVEN A. INFORMATION FOR SEQ ID NO: TOPOLOGY: U REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELECHONE: (212) 758-4800 CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P. TITLE OF INVENTION: TITLE OF INVENTION: SEQUENCE CHARACTERISTICS: NUMBER OF SEQUENCES: STRANDEDNESS: STREET: 345 PARK AVENUE CITY: NEW YORK STATE: NEW YORK COUNTRY: USA ZIP: 10154 TELEFAX: (212) 751-6849 TELEX: 421792 LENGTH: amino acid Unknown E: Peptide Unknown MELANOMA ANTIGENS AND THERAPEUTIC THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS 70: 2026-4124US1

Similarity 8

98.3%;

Score 57; DB 2; Pred. No. 2.5e+05; 1; Mismatches 0

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Gaps

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Length 9; Indels

Conservative

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US-09-267-439-70
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US-09-267-439-70
                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: US/08/41,,
PILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
PILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124
TELECOMMUNICATION 10070MATION:
TELECOMMUNICATION 1758-4800
                                                                                                                                                                                                          Query Match
Best Local Similarity 88...
Conservative
                                                                  Sequence 70, Applicat Patent No. 6537560 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No.
   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                            TELEX: 421792
INFORMATION FOR SEQ ID NO:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: ASCII
CURRENT APPLICATION DATA:
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MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: KAWAKAMI, APPLICANT: STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
STRANDEDNESS: Unl
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER:
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                                                                                                  Application US/09073138
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                                                      KAWAKAMI, YUTAKA; ROSENBERG,
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                                                                                                                                                                                                                                                                                                                        Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM PC COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MORGAN & FINNEGAN, L.L.P
                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                     Unknown
                                                                                                                                                                                                                                              98.3%;
            MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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METHODS
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Pred. No.
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                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: KAWAKAMI, Y
APPLICANT: STEVEN A.
APPLICANT: STEVEN A.
TITLE OF INVENTION: TH
TITLE OF INVENTION: ME
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 68, Application US/08417174 Patent No. 5844075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
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Best Local
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INFORMATION FOR SEQ ID NO:
                COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/417,1'
FILING DATE: 05-APR-1995
                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY I
                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 126
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
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REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/0:
FILING DATE: 05-APR-1995
CLASSIFICATION:
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APPLICATION NUMBER: US/09/073,138
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ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
STREET: 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION: NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
TOPOLOGY: Un
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (212) 751-6849
                                                                                                                                                                                           STATE:
                                                                                                                                                                                                       STREET: 345 PARK AVENUE CITY: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                       COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
                                                                                                                                                        10154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 88. 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown
                                                                                                                      FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown
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88.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 57; 1
Pred. No. 2
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Best Local Similarity
                                                                                                                                                                                                                             SOPTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-417-174-69
                                                                                  INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
TELECHONE: (212) 758-4800
                                                                                                                                                                        CLASSIFICATION: 455
CLASSIFICATION: 455
ATTORNEY/ACENT INFORMATION:
NAME: CAROL M. GRUPPI
NAME: CAROL M. MIMBER: 37,341
                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY I
COMPUTER: IBM PC COM
OPERATING SYSTEM: PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: Ur
MOLECULE TYPE:
                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P
STREET: 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                    TELEPHONE: (212) 751-6849
               STRANDEDNESS: Unl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
STRANDEDNESS: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (212) 751-6849
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OPOLOGY: Unknown
                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                             10154
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
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                                                                                                                                                                                                                                                                                                                                                                    3: FLOPPY DISK
IBM PC COMPATIBLE
SYSTEM: PC-DOS/MS-DOS
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                   Unknown
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88.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               126
                                                                                                                                                                   2026-4124US1
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Pred. No. 2.
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Query Match
Best Local Similarity 88.7*
hes 8; Conservative
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                                                                                         US-09-267-439-68
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                             Matches
                                                          Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 68,
                                          Best Local Similarity
                                                                                                                                                                                                                                                                                               FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US/08/417,174
APPLICATION UNMBER: US/08/231,565
APPLICATION UNMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: KAWAKA
APPLICANT: STEVEN
                                                                                                                                                                                           TELEX: 421792
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                 TOPOLOGY: Unknown MOLECULE TYPE: Peptide
                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 9
                                                                                                                                                                                                                                        REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
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TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: ASCII
CURRENT APPLICATION DATA:
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ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                               STRANDEDNESS: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 10154
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1 KVWGQYWQV 9
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6270778
                                                                                                                                                  amino acid
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                             Conservative
                                                                                                                                    Unknown
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88.9%;
                                          94.8%;
88.9%;
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                                             Score 55; DB 3;
Pred. No. 2.5e+0
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Pred. No. 2.5e+05;
                                            5e+05;
                             0; Indels
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                                                        Length 9;
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US-09-267-439-69 ; Sequence 69, Application US/09267439 ; Patent No. 6270778

RESULT 7

GENERAL INFORMATION:

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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
-09-267-439-69
                                                                                                                                                                                                                                                                                                         APPLICANT: KAWAKAMI, APPLICANT: STEVEN A.
TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION: M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: KAWAKAMI
APPLICANT: STEVEN A
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: CANCOLLING TO THE PROPERTY OF THE PROPER
                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
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NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                     TUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
STRANDEDNESS: Unk
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LECUTIONE: (212)
TELEPHONE: (212)
751-6849
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FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE:
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STATE: NEW YORK
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                                                                                              COUNTRY:
                                                                                                                                                                                                                       ADDRESSEE:
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                                                                                                                                                            NEW YORK
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                                                                                                                               NEW YORK
                                                                                                                                                                                             345 PARK AVENUE
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METHODS
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126
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THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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Pred. No. 2
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TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
US-09-073-138-68
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Best Local Similarity 88.5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION
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INFORMATION FOR SEQ ID NO:
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEDHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: STEVEN A.
TITLE OF INVENTION: MI
TITLE OF INVENTION: MI
TITLE OF INVENTION: MI
NUMBER OF SEQUENCES: :
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NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20.
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                   SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/073,138
                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IEM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
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LENGTH: 9
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CURRENT APPLICATION DATA:
US/09/073,138
                                                                                                   FILING DATE:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                           E: MORGAN & FINNEGAN, L.L.P.
345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (212) 751-6849
                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                             THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MELANOMA ANTIGENS AND
                                                                                                                                                                                                                                                                                                                                                                                                                             126
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                                      2026-4124US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2026-4124US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 55; Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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                                                                                                        ; MOLECULE TYPE:
US-08-787-547-61
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                                                                Query Match
Best Local :
                                                    Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                     TELEX: 200154
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 9 amino acids
                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: U
FILING DATE: 22-JAN-1
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION: TELEPHONE: 617-542-5070
                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
                                                                                                                                                                                                                                                      NAME: Fraser, Janis K.
REGISTRATION NUMBER: 34,819
REFERENCE/DOCKET NUMBER: 08
                                                                                                                                 TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM: Windows95
SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER:
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                                                                                                                                                                                                                TELEFAX:
                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
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STRANDEDNESS: Unl
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
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                                                                Similarity
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                         KVWGQYWQV 9
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KTWGQYWQV 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 225 Franklin Street
                                                                                                                                                                                                                617-542-8906
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VENTION: MICROPARTICLES FOR DELIVERY
                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Curley, Joanne
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                                                                                                                                                                                                                                                                                                                                                                                                                                    IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fish & Richardson, P.C.
                                                                                                                  peptide
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                                                                                                                                                                                                                                                                                                                                                                   22-JAN-1997
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                                                               93.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69:
                                                 Score 54; DB 1;
Pred. No. 2.5e+05;
0; Mismatches 1
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Pred. No. 2.5e+05;
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                                                                          Length 9;
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                                                  Indels
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Query Match
Best Local Similarity
Watches 8; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
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Sequence 29, App.
Sequence 29, App.
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                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                          APPLICANT: SOO HOO, WITTILE OF INVENTION: OF
                                                                                                                                                       NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: Un
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION UMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: ASCII
SOFTWARE ASCIION DATA:
CURRENT APPLICATION DATA:
US/08/417,174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX:
                        CITY: San Diego
STATE: California
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OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
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COUNTRY:
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                                                                                                                               ADDRESSEE:
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                                                                                           E: CAMPBELL & FLORES, LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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United States
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (212) 758-4800
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                                                                                                                                                                                                                              MEMBRANE-BOUND CYTOKINE COMPOSITIONS
COMPRISING GM-CSF AND METHODS OF MODULATING AN IMMUNE
RESPONSE USING SAME
                                                                                                                                                                                                                                                                                                                                    William
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46:
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Pred. No. 2.5e+05
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ZIP: 92121 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy

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US-09-036-582-26
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                                                                                                                                    US-09-183-706-30
                                                                                                                                                      RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 26
LENGTH: 9
TYPE: PRT
                                                                                   GENERAL INFORMATION:
                                                                                                    Sequence 30, Application US/09183706 Patent No. 6245525
                                                                                                                                                                                                                                                                                        Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                          Matches
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Patent No. 5965381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
            APPLICANT: Martelange, Valrie
APPLICANT: De Smet, Charles
APPLICANT: Boon-Falleur, Thierry
TITLE OF INVENTION: TUMOR ASSOCIATED NUCLEIC ACIDS AND USES THEREFOR
                                                                                                                                                                                                                                                                                                                                            ORGANISM: Human gp100Pmel117 peptide - 09-036-582-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/036,582A CURRENT FILING DATE: 1998-03-06 NUMBER OF SEQ ID NOS: 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: van der Bruggen, Pierre
APPLICANT: Cornells, GUY R.
TITLE OF INVENTION: DELIVERY OF PROTEINS INTO EUKARYOTIC CELLS
TITLE OF INVENTION: WITH RECOMBINANT YERSINIA
FILE REFERENCE: L0461/7054
                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 11154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: (619)535-9900
TELEFAX: (619)535-8949
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-IM
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 29-JUL CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH:
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8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9 amino acids
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Pred. No. 2.5e
0; Mismatches
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Pred. No.
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                                                                                                                                                                                                                                                                                                            DB 2;
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US-09-267-439-46
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Best Local Similarity 88.9%;
Matches 8; Conservative
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/183,706
CURRENT FILING DATE: 1998-10-30
EARLIER APPLICATION NUMBER: 09/122,989
EARLIER FILING DATE: 1999-07-27
                                                                                                                                                                 TELEX: 421792
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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APPLICANT: STEVEN A.
TITLE OF INVENTION: MI
TITLE OF INVENTION: MI
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TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: 1BM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/267,4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY !
                                                                                     TOPOLOGY: Unknown MOLECULE TYPE: Peptide
                                                                                                                                                                                                                                 TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
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                                                                                                                      TYPE: amino acid
STRANDEDNESS: Unknown
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                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                    STRANDEDNESS:
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o. 6270778
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MORGAN & FINNEGAN, L.L.P
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THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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                       Score 54; DB 3; Pred. No. 2.5e+05;
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Pred. No. 2.5e+05;
                                        Length 9;
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          Indels
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          Gaps
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RESULT 18
US-09-165-863-26
IS-09-165-863-26
; Sequence 26, Application US/09165863
; Patent No. 6407063
; GENERAL INFORMATION:
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US-09-567-995-30
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-166-448-71
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US-09-166-448-71
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US-09-567-995-30
                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: TUMOR ASSOCIATED NUCLEIC ACIDS AND USES THEREFOR FILE REFERENCE: L0461/7054
CURRENT APPLICATION NUMBER: US/09/567,995
CURRENT FILING DATE: 2000-05-10
PRIOR APPLICATION NUMBER: 09/183,706
PRIOR APPLICATION NUMBER: 09/183,706
PRIOR FILING DATE: 1998-10-30
NUMBER OF SEQ ID NOS: 43
SEQ ID NO 30
LENGTH: 9
TYPE-THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION: APPLICANT: Martela
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Patent No. 6303756
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Best Local Similarity
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                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                              Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Boon-Falleur, Thierry
APPLICANT: van der Bruggen, Pierre
APPLICANT: van der Bruggen, Pierre
APPLICANT: Thielemans, Kris
APPLICANT: Corthals, Jurgen
TITLE OF INVENTION: MAGE-3 PEPTIDES PRESENTED BY HLA CLASS II MOLECULES
FILE REFERENCE: L0461/7052
APPLICANT: Luiten, Rosalie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/166,448
CURRENT FILING DATE: 1998-10-05
NUMBER OF SEQ ID NOS: 81
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APPLICANT: Vantomme, Valrie
APPLICANT: Strobant, Vincent
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                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                Local
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8; Conser
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Boon-Falleur, Thierry
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Pred. No. 2.5e+05
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Best Local Similarity
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Best Local Similarity
Watches 8; Conserva
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                                                                                                                                                                                                                                                                                                                 ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-697-884-71
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TYPE: PRT
CORGANISM: Human gp100Pmel117 peptide
US-09-165-863-26
                                                                                                             US-09-847-185-29
                      Sequence 29, Application US
PATENT NO. 6482407
PATENT INFORMATION:
APPLICANT: SOO HOO,
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/165,863
CURRENT FILING DATE: 1999-10-02
NUMBER OF SEQ ID NOS: 45
SOFTWARE: PATENTIN VEY. 2.1
SEQ ID NO 26
                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Fa
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                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Corthals, Jurgen
TITLE OF INVENTION: MAGE-3 PEPTIDES PRESENTED BY HLA CLASS II MOLECULES
FILE REFERENCE: L0461/7052
CURRENT APPLICATION NUMBER: US/09/697,884
CURRENT FILING DATE: 2000-10-27
PRIOR APPLICATION NUMBER: 09/166,448
PRIOR FILING DATE: 1998-10-05
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APPLICANT: Boon-Falleur, Thierry
APPLICANT: Chaux, Pascal
TITLE OF INVENTION: TUNOR ANTIGENS AND CTL CLONES ISOLATED BY A NOVEL
TITLE OF INVENTION: PROCEDURE
FILE REFERENCE: 11727
FILE REFERENCE: 11727
                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 81
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APPLICANT: Stroobant, Christophe
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APPLICANT: Demotte, Nathalie
APPLICANT: van der Bruggen, Pierre
APPLICANT: Cornelis, Guy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Chaux, Pascal
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van der Bruggen, Pier
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                                                                                           Application US/09847185
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88.9%;
William
MEMBRANE-BOUND CYTOKINE COMPOSITIONS
COMPRISING GM-CSF AND METHODS OF MODULATING AN IMMUNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pierre
                                                                                                                                                                                                                                              Score 54; DB Pred. No. 2.5e
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Pred. No. 2.5e+05;
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                                                                                                                                                                                                                                                                  5e+05
                                                                                                                                                                                                                                                                              Length 9;
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; TOPOLOGY: Inear
; MOLECULE TYPE: peptide
; SEQUENCE DESCRIPTION: SEQ ID NO: 29:
US-09-847-185-29
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                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No. 6500919
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                 FILING DATE: February 15, INFORMATION FOR SEQ ID NO: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (619)535-8949 INFORMATION FOR SEQ ID NO: 29:
                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
COMPUTER: ISM PC compatible
COMPUTER: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/847,185
FILING DATE: 01-May-2001
CLASSIFICATION: UNADABA
                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                  CITY: Nijmegen
                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 09/201,931
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: CAMPBELL & FLORES, LLP
STREET: 4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-IM 2442
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
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8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                           2, Application US/08388852B 6500919
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 9 amino acids
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                                                                                                                                                                                                                                                Brabant
                                                                                                                                                                                                                                                                                        Philips van Leydenlaan
9 amino acids
                                                                                                                                                                                                                                                                                                                                                           Adema, Gosse Jan; Figdor, Carl Gustav.

WENTION: Melanoma associated antigenic polypeptide,

WENTION: epitopes thereof and vaccine against melanoma.
                                                                                                                                                                                                                              the Netherlands
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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ilips van Leydenlaan 25
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                                                                   US/08/388,852B
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Pred. No. 2.5e
0; Mismatches
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                                                                                                                                                                                                                         RESULT 23
                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Human gp100Pmel117 peptide US-09-289-350-26
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Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 26
LENGTH: 9
                                                                                                                                                               Patent No. 6537560
GENERAL INFORMATION:
                                                                                                                                                                             Sequence 46, Application US/09073138 Patent No. 6537560
                                                                                                                                                                                                                                                                                                                         Matches
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: 11727Z
CURRENT APPLICATION NUMBER: US/09/289,350
CURRENT FILING DATE: 1999-04-09
PRIOR APPLICATION NUMBER: 09/165,863
PRIOR FILING DATE: 1998-10-02
NUMBER OF SEQ ID NOS: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: TUMOR ANTI
                                                                                         APPLICANT: KAWAKAMI, APPLICANT: STEVEN A.
TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION: M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
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MOLECULE TYPE:
HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                              NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                        Local Similarity
les 8; Conserv
             STATE: NEW YORK
                                     STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: si
                                                   ADDRESSEE:
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                                                                                                                                                                                                                                                                                              KVWGQYWQV 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Van Der Bruggen, Pierre
VENTION: TUMOR ANTIGENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stroobant, Vincent
Cornelis, Guy R.
Boon-Falleur, Thierry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Traversari, Catia
Stroobant, Vincent
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Luiten, Rosalie
                                       345 PARK AVENUE
USA
                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                   KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
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NO
                                                      MORGAN & FINNEGAN, L.L.P
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                                                                                             THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS
                                                                                                                         MELANOMA ANTIGENS AND
                                                                                 126
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Pred. No. 2.5e+05;
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Pred. No.
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OPERATING SYSTEM: PC-DOS/MS-DOS

IBM PC COMPATIBLE

COMPUTER:

MPUTER READABLE FORM: MEDIUM TYPE: FLOPPY DISK

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Query Match
Best Local Similarity 80...
Thes 8; Conservative
                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 27
LENGTH: 9
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                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 09/524,749
PRIOR FILING DATE: 2000-05-18
NUMBER OF SEQ ID NOS: 58
                                                                                                                                                                                                                                                                                                         FILE REFERENCE: C1005/7012/KA/ERG
CURRENT APPLICATION NUMBER: US/09/574,749B
CURRENT FILING DATE: 2002-05-31
PRIOR APPLICATION NUMBER: US 60/107,972
PRIOR FILING DATE: 1998-11-12
PRIOR APPLICATION NUMBER: PCT/US99/26795
PRIOR FILING DATE: 1999-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: POZNANSKY, MARK C.
TITLE OF INVENTION: LYMPHOID TISSUE-SPECIFIC CELL PRODUCTION
TITLE OF INVENTION: FROM HEMATOPOIETIC PROGENITOR CELLS IN THREE-DIMENSIONAL
TITLE OF INVENTION: DEVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 equence 27, Application US/09574749B
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 226
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                            ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT: ROSENZWEIG, Michael
                                                                                                                        OTHER INFORMATION: Homo Sapiens source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
STRANDEDNESS: Unkr
TOPOLOGY: Unknown
MOLECULE TYPE: Pepti
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REPLICATION NUMBER: US/UY/U/,---
ETLING DATE:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US/08/417,174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
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CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match 93.1%;
Local Similarity 88.9%;
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SCADDEN, David T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                              93.1%;
88.9%;
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                           Score 54; DB 4; Length 9; Pred. No. 2.5e+05; O; Mismatches 1; Indels
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Pred. No. 2.5e+05
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                               Indels
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Search completed: August 14, 2003, 09:08:01 Job time: 21.5 secs
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                                                                                                                                                                                                                                                                                                                                                                                EARLIER APPLICATION NUMBER: 60/037,781
EARLIER FILING DATE: 1997-01-31
NUMBER OF SEQ ID NOS: 104
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. 65500
Patent No. 65500
PATENAL INFORMATION:
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Sequence 82, App-
No. 655867
                                                                                                                                                             Matches
                                                                                                                                                                                                     Query Match
                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT FILING DATE: 1999-09-20
EARLIER APPLICATION NUMBER: PCT/US98/01592
EARLIER FILING DATE: 1998-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: SLINGLUFF, Craig L.
APPLICANT: HUNT, Donald F.
APPLICANT: ENGELHARD, Victor H.
APPLICANT: KITTLESEN, David
APPLICANT: KITTLESEN, David
TITLE OF INVENTION: CYSTEINE-DEPLETED PEPTIDES RECOGNIZED BY A3-RESTRICTED
TITLE OF INVENTION: CYSTENCE-DEPLETED, AND USES THEREFOR
FILE REFERENCE: SLINGLUFF=3B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/341,982
                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence: Fragment OTHER INFORMATION: human protein
                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                             8
                                                                                                                          KVWGQYWQV 9
                                                                               KTWGQYWQV
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                                                                                                                                                             Conservative
                                                                                                                                                                                  88.9%;
                                                                                                                                                             0;
                                                                                                                                                                                  Score 54; DB 4; Length 9; Pred. No. 2.5e+05;
                                                                                                                                                             Mismatches
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Result
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Maximum |
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Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein - protein search, using sw model
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
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                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB seq length: 0
DB seq length: 2000000000
                                                                                                                                                                                                                                       Score
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58
                                                                                                                                                                                                                                       Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       August 14, 2003, 09:07:19; Search time 153 Seconds (without alignments) 7.706 Million cell updates/sec
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Listing first 45 s
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                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                           cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                         DВ
                       US-09-847-185-29

US-09-923-831-30

US-09-966-889A-42

US-09-909-460-61

2 US-09-898-860-46

4 US-10-106-487-2

5 US-10-106-13-5

US-10-124-286-29

5 US-10-224-286-29
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US-09-898-860-68
US-09-898-860-69
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                                                                                                                                                                                                                                                                                     SUMMARIES
                       Sequence 70, Appl
Sequence 68, Appl
Sequence 69, Appl
Sequence 29, Appl
Sequence 20, Appl
Sequence 42, Appl
Sequence 61, Appl
Sequence 61, Appl
Sequence 62, Appli
Sequence 2, Appli
Sequence 5, Appli
Sequence 27, Appli
                                                                                                                                                                                                                                      Description
Sequence
              Sequence
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45	44	43	42	41	40	39	38	37	36		34		32	31	30	29	28	27		25	24	23	22	21	20		18	17	16
38	39	40	41	41	41	41	41	41	41	44	45	49	49	49	49	49	50	50	50	50	50	50	50	50	54	54	54	54	54
65.5	6.7.2	69.0	70.7	70.7	70.7	70.7	70.7	70.7	70.7	75.9	77.6	•	84.5	84.5		84.5		86.2	86.2	86.2	86.2	86.2	86.2	86.2		93.1	93.1	93.1	93.1
45	165	136	756	756	756	756	756	756	267	9	9	9	9	9	9	9	661	626	9	9	9	9	9	9	899	661	661	661	661
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US-09-776-724A-257	US-10-156-761-12033	US-09-864-761-39224	US-10-338-462-9	US-10-243-408-2	US-09-844-988-9		US-09-771-161A-232	US-09-796-872-15	US-10-106-698-4732	US-09-898-860-77	US-09-898-860-76	-09	US-09-898-860-74	-09-	US-09-898-860-72	US-09-898-860-71	1	-10-047-539-	US-10-047-539-8	-09-898-860-	US-09-898-860-81	-09-898	US-09-898-860-79	7	US-10-047-539-4	US-10-207-655-77	US-09-898-860-121	US-09-812-238B-2	US-09-862-260A-2
Sequence 257, App	Œ	392	9	2		Sequence 9, Appli	e 232	-	473		76,	75,		73,	72,	71,	27,	۲	,	82,	81,		79,	78,	Sequence 4, Appli	e 77,	12	Φ	Sequence 2, Appli

ALIGNMENTS

RESULT 1

US-09-898-860-70
Sequence 70, Application US/0989860
Publication No. US20030144482A1
GENERAL INFORMATION:
APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
METHODS
NUMBER OF SEQUENCES: 126
CORRESSEES: ADDRESSEE; MORGAN & FINNEGAN, L.L.P.
STREET: 345 PARK AVENUE
CITY: NEW YORK
COUNTRY: USA
ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-U1-2001
PRIOR APPLICATION NUMBER: US/09/898,860
FILING DATE: SO-ADR-1956
APPLICATION NUMBER: US/09/267,439
FILING DATE: CS-APR-1954
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1954
APPLICATION NUMBER: US/08/231,565
FILING DATE: CS-APR-1954
APPLICATION NUMBER: US/08/231,565
FILING DATE: CS-APR-1954
AFTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:

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TYPE: amino acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 70:
US-09-898-860-70
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US-09-898-860-68
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US-09-898-860-68
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Best Local Similarity
                                                                                                                    TELEX: 421792
INFORMATION FOR SEQ ID NO: 68:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEX: 421792
INFORMATION FOR SEQ ID NO: 70:
                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-U1-2001
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
FILING DATE: <Unknown>
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1996
FILING DATE: 05-APR-1994
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER FRADABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
             TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 68:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: MELANOMA ANTIGENS AND
THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KIWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KVWGQYWQV 9
                                                                      TYPE: amino acid
STRANDEDNESS: Unknown
                                                                                                                                                                                TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 37,341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                           LENGTH: 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09898860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           METHODS
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Pred. No. 4.4e+05;
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US-09-847-185-29 ; Sequence 29, Application US/09847185 ; Patent No. US20020076392A1

RESULT 4

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Publication No. US20030144482A1
GENERAL INFORMATION:
APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                  Matches
                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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Best Local Similarity
                                                                                                                                                                                                                                                           TELEX: 421792
INFORMATION FOR SEQ ID NO: 69:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/231,565 FILING DATE: 22-APR-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PILING DATE: 03-Jul-2001
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
PILING DATE: - CUNKNOWN APPLICATION NUMBER: US/08/417,174
PILING DATE: 05-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/898,860
                                                                                                                                                  TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 69:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: MELANOMA ANTIGENS AND THERAPEUTIC
                   1 KVWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 KVWGQYWQV 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
                                                                                                                                                                                                                        TYPE: amino acid
                                                                                                                                                                                                            STRANDEDNESS: Unknown
                                                                                                                                                                                                                                                                                                             TELEPHONE: (212) 758-48
                                                                                                                                                                                                                                                                                                                                                                                                      NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                           ENGTH:
                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STEVEN A.
                                                                                   94.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88.9%;
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                                                                                   Score 55; DB 12;
Pred. No. 4.4e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 55; DB 12;
Pred. No. 4.4e+05;
                                                                  Mismatches
                                                                                                 Length 9;
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                                                                  Indels
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                                                                  0;
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                                                                  Gaps
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RESULT 5
US-09-923-831-30
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                                                                                                                             APPLICANT: Martelange, Val, rie
APPLICANT: De Smet, Charles
TITLE OF INVENTION: TUMOR ASSOCIATED NUCLEIC ACIDS AND USES THEREFOR
FILE REPERENCE: L0461/7054
CURRENT APPLICATION NUMBER: US/09/923,831
CURRENT FILING DATE: 2001-08-07
PRIOR APPLICATION NUMBER: 09/183,706
PRIOR APPLICATION NUMBER: 09/183,706
PRIOR FILING DATE: 2001-10-30
NUMBER OF SEQ ID NOS: 43
SEQ ID NO 30
LENGTH: 9
LENGTH: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
  Best Local Similarity
                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                     sequence 30, Application US/09923831
Patent No. US2002011514771
                                                              TYPE: PRT
ORGANISM: Homo sapiens
-09-923-831-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 29: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: SOO HOO,
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: peptide SEQUENCE DESCRIPTION: SEQ ID NO: 29:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC Compatible

COMPUTER: FLOPPY COMPATION

COMPUTER: FLOPPY COMPATION

COMPUTER: PATENT PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-IM 2442
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 09/201,931 FILING DATE: <Unknown> ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KTWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KVWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/09/847,185
FILING DATE: 01-May-2001
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (619)535-9001
TELEFAX: (619)535-8949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: CAMPBELL & FLORES, LLP
STREET: 4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     California
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93.1%;
88.9%;
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MEMBRANE-BOUND CYTOKINE COMPOSITIONS
COMPRISING GM-CSF AND METHODS OF MODULATING AN IMMUNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESPONSE USING SAME
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Pred. No. 4.4e+05
0; Mismatches
Pred. No. 4.4e+05;
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                                                                                                             ; LENGTH: 9
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-909-460-61
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Best Local Similarity
""" hes 8; Conserva
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US-09-766-889A-42
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                                                                                                                                                                               APPLICANT: Putnam, David
APPLICANT: Hedley, Mary Lynn
APPLICANT: Hedley, Mary Lynn
APPLICANT: Hedley, Mary Lynn
TITLE OF INVENTION: MCROPARTICLES FOR DELIVERY OF NUCLEIC
TITLE OF INVENTION: ACID
FILE REFERENCE: 08191/014001
CURRENT APPLICATION NUMBER: US/09/909,460
CURRENT FILING DATE: 2001-07-18
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US/09/321,346
PRIOR APPLICATION NUMBER: EARLIER FILING DATE: 1999-05-27
NUMBER OF SEQ ID NOS: 114
SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 61
                                     Query Match
Best Local Similarity
Matches 8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 42
                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 61, Application US/09909460 Publication No. US20020182258A1
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Patent No. US20020164654A1
                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Lunsford, Lynn B. APPLICANT: Putnam, David APPLICANT: Hedley, Mary Lynn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/766,889A CURRENT FILING DATE: 2001-01-19 PRIOR APPLICATION NUMBER: US 60/177,242 PRIOR FILING DATE: 2000-01-20 PRIOR APPLICATION NUMBER: US 60/243,212 PRIOR FILING DATE: 2000-10-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Stroobant, Vincent
APPLICANT: Demotte, Nathalie
APPLICANT: Schultz, Erwin
TITLE OF INVENTION: MAGE ANTIGENIC PEPTIDES WHICH BIND HLA-B35 AND HLA-B44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: L0461/7104
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KVWGQYWQV 9
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                                                      Score 54; DB 10;
Pred. No. 4.4e+05;
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Pred. No. 4.4e+05;
                                           Mismatches
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                                                                         Length 9;
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RESULT 9
US-10-106-487-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-898-860-46
              Sequence 2, Application US/10106487

Publication No. US20020164721A1
GENERAL INFORMATION:
APPLICANT: FIRAT, HUSEYIN
APPLICANT: LAMONNIER, FRANCOIS
APPLICANT: LAMONNIER, FRANCOIS
APPLICANT: LAMONNIER, FIRAT
APPLICANT: MICHEL, MARIE-LOUISE
APPLICANT: MICHEL, MARIE-LOUISE
TITLE OF INVENTION: DESIGN OF A POLYEPITOPIC CONSTRUCT FOR THE INDUCTION
                                                                                                                                                                                                                                                                                                                                                                                      Query Match 93.1%;
Best Local Similarity 88.9%;
Matches 8; Conservative
TITLE OF INVENTION:
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INFORMATION FOR SEQ ID NO: 46:
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APPLICATION NUMBER: US/09/267,439

FILING DATE: <Unknown

APPLICATION NUMBER: US/08/417,174

FILING DATE: 05-APR-1995

APPLICATION NUMBER: US/08/231,565

FILING DATE: 22-APR-1994

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 46:
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APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-Jul-2001
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MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: MELANOMA ANTIGENS AND THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRES
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                                                                                                                                                                                                                                                                                                                                                KVWGQYWQV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
STRANDEDNESS: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: NEW YORK
STATE: NEW YORK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              METHODS
                                                                                                                                                                                                                                                                                                                                                                                                             Score 54; DB 12;
Pred. No. 4.4e+05;
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FILE REFERENCE: 03495.0196 SEQUENCE LISTING CURRENT APPLICATION NUMBER: US/10/106,487 CURRENT FILING DATE: 2002-03-27 PRIOR APPLICATION NUMBER: 09/675,673 PRIOR FILING DATE: 2000-09-29 PRIOR APPLICATION NUMBER: 60/158,356 PRIOR FILING DATE: 1999-10-12 NUMBER OF SEQ ID NOS: 41 SOPTWARE: Patentin Ver. 2.1 SEQ ID NO 2
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US-10-080-013-5
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US-10-047-539-5
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US-10-106-487-2
Sequence 5, Application US/10080013

Publication No. US20030077248A1

GENERAL INFORMATION:

APPLICANT: Moriarty, Ann
APPLICANT: Leturcq, Didier
APPLICANT: Degraw, Juli
APPLICANT: Heiskala, Marja
APPLICANT: Peterson, Per
APPLICANT: Jackson, Michael
TITLE OF INVENTION: A CELL THERAPY METHOD FOR THE TREATMENT OF TUMORS
FILE REFERENCE: ORT-1557
CURRENT APPLICATION NUMBER: US/10/080,013
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/047,539
CURRENT FILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: EP 01 10 0914.9
PRIOR FILING DATE: 2001-01-16
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 5
LENGTH: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: MOLLING, KARIN
APPLICANT: PAVLOVIC, JOVAN
APPLICANT: NAWRATH, MICHAEL
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING
TITLE OF INVENTION: CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
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TITLE OF INVENTION: HHD MICE
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TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: VOS-27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 88.9
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Pred. No. 4.4e+05;
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Pred. No. 4.4e+05;
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RESULT 13
US-10-224-286-29
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US-10-161-097-27
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US-10-080-013-5
                                                                                           Sequence 29, Application US/10224286
Publication No. US20030108517A1
GENERAL INFORMATION:
GENERAL INFORMATION:
MILLIAM
APPLICANT: Soo Hoo, William
APPLICANT: Soo Hoo, William
TITLE OF INVENTION: MEMBRANE-BOUND CYTOKINE COMPOSITIONS
COMPRESING GM-CSF AND METHODS OF MODULATING AN IMMUNE
RESPONSE USING SAME
                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
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Best Local
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PRIOR FILING DATE: 1998-11-12
PRIOR APPLICATION NUMBER: PCT/US99/26795
PRIOR FILING DATE: 1999-11-12
PRIOR APPLICATION NUMBER: US 09/524,749
PRIOR FILING DATE: 2000-05-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: C1005/7012/KA/ERG
CURRENT APPLICATION NUMBER: US/10/161,097
CURRENT FILING DATE: 2002-05-31
PRIOR APPLICATION NUMBER: US/09/574,749
PRIOR FILING DATE: 2002-05-31
PRIOR FILING DATE: 2002-05-31
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: ROSENZWEIG, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: POZNANSKY, MARK C.

TITLE OF INVENTION: LYMPHOID TISSUE-SPECIFIC CELL PRODUCTION

TITLE OF INVENTION: FROM HEMATOPOIETIC PROGENITOR CELLS IN 1

TITLE OF INVENTION: DEVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Homo Sapiens source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH:
            CORRESPONDENCE ADDRESS:
ADDRESSEE: CAMPBELL & FLORES, LLP
STREET: 4370 La Jolla Village Drive,
                                                                              NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                  KVWGOYWQV 9
CITY: San Diego
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SCADDEN, David T.
                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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88.9%;
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Pred. No. 4.4e+05;
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Pred. No.
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                   Suite 700
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RESULT 14
US-09-998-860-47
Sequence 47, Application US/09898860
Publication No. US20030144482A1
GENERAL INFORMATION:
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Best Local Similarity
Matches 8; Conserv
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SEQUENCE CHARACTERISTICS:
                                                                              COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-Uul-2001
PRIOR APPLICATION NUMBER: US/09/267,439
FILING DATE: CURRENT
APPLICATION NUMBER: US/09/267,439
FILING DATE: CURRENT
APPLICATION NUMBER: US/09/267,439
FILING DATE: CURRENT
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/902,516
FILING DATE: 29-UUL-1997
ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/224,286
FILING DATE: 19-Aug-2002
                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear MOLECULE TYPE: peptide SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPAN: (619)535-8949
                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            METHODS NUMBER OF SEQUENCES: 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: MELANOMA ANTIGENS AND THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 KVWGQYWQV 9
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
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COUNTRY: United States
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                       STATE: NEW YORK
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                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
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Pred. No. 4.4e+05;
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                                                                                                                                US-09-862-260A-2
                                                                                                                                                 RESULT 16
                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo sapiens
US-10-106-487-24
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US-10-106-487-24
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               Sequence 2, Application US/09862260A
Patent No. US20020082217A1
GENERAL INFORMATION:
APPLICANT: Nicolette, Charles A.
TITLE OF INVENTION: THERAPEUTIC ANTI-MELANOMA COMPOUNDS
FILE REFERENCE: 126881210200
                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 24
LENGTH: 92
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Best Local &
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: MICHEL, MARIE-LOUISE
TITLE OF INVENTION: DESIGN OF A POLYEPITOPIC CONSTRUCT FOR THE INDUCTION
TITLE OF INVENTION: OF A POLYEPITOPIC CONSTRUCT FOR THE INDUCTION
TITLE OF INVENTION: HLA-A2.1 RESTRICTED HIV 1 SPECIFIC CTL RESPONSES USING
TITLE OF INVENTION: HLD MICE
FILE REFERENCE: 03495, 0196 SEQUENCE LISTING
CURRENT APPLICATION NUMBER: US/10/106,487
CURRENT FILING DATE: 2002-03-27
CURRENT FILING DATE: 2002-03-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 09/675,673
PRIOR FILING DATE: 2000-09-29
PRIOR APPLICATION NUMBER: 60/158,356
PRIOR FILING DATE: 1999-10-12
NUMBER OF SEQ ID NOS: 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
CURRENT APPLICATION NUMBER: US/09/862,260A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: FIRAT,
                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
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MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 47:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
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8; Conserva
                                                                                                                                                                                                          KTWGQYWQV 46
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REFERENCE/DOCKET NUMBER: 2026-4124US1
                                                                                                                                                                                                                                            KVWGQYWQV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LEMONNIER, FRANCOIS
LANGLADE-DEMOYEN, PIERRE
MICHEL, MARIE-LOUISE
                                                                                                                                                                                                                                                                                   Conservative
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Pred. No. 0.064;
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Pred. No. 0
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APPLICANT: Nicolette, Charles
; TITLE OF INVENTION: THERAPEUTIC ANTI-MELANOMA COMPOUNDS
; FILE REFERENCE: GZ 2094.00
; CURRENT APPLICATION NUMBER: US/09/812,238B
; CURRENT FILING DATE: 2002-05-21
; NUMBER OF SEQ ID NOS: 19
; SOFTMARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 2
; LENGTH: 661
; TYPE: PAT
; ORGANISM: Homo sapiens
US-09-812-238B-2
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Best Local Similarity
Whiches 8; Conserve
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; ORGANISM: Homo sapiens
US-09-862-260A-2
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                                                                                                                                                                                                                                                                                                        Sequence 121, Application US/09898860
Publication No. US20030144482A1
GENERAL INFORMATION:
APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2, Application US/09812238B Patent No. US20020169132A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/208,955
PRIOR FILING DATE: 2000-05-31
PRIOR APPLICATION NUMBER: 60/267,877
PRIOR FILING DATE: 2001-02-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH: 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity les 8; Conserv
              ZIP: 10154

COMPUTER READABLE FORM:

MEDIUM TYPE: FLOPPY DISK

COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOPTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P
                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                           TITLE OF INVENTION: MELANOMA ANTIGENS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154 KTWGQYWQV 162
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                                                                                                                                                 STREET: 345 PARK AVENUE CITY: NEW YORK
                                                                                                                                      STATE: NEW YORK
                                                                                                                    COUNTRY: USA
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88.9%;
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Pred. No. 2
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Pred. No. 2
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                                                                                                                                              US-10-047-539-4
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-207-655-77
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Publication No. US20030118592A1
GENERAL INFORMATION:
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Best Local Similarity
                                                                                                   Sequence 4, Application US/10047539
Publication No. US20020177547A1
                                                                                                                                                                                                                                                                                                   Query Match 93.1%;
Best Local Similarity 88.9%;
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 426
SOFTWARE: PatentIn version 3.0
SEQ ID NO 77
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                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Ledbetter, Jeffrey A.
APPLICANT: Hayden-Ledbetter, Martha S.
TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
FILE REFERENCE: 390069.401C1
CURRENT APPLICATION NUMBER: US/10/207,655
CURRENT FILING DATE: 2002-07-25
APPLICANT: MOLLING, KARIN
APPLICANT: PAVLOVIC, JOVAN
APPLICANT: NAWRATH, MICHAEL
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 121: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/09/267,439
FILING DATE: <Unkinowns
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: Protein
SEQUENCE DESCRIPTION: SEQ ID NO: 121:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/898,860 FILING DATE: 03-Jul-2001 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                          154 KTWGQYWQV 162
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (212) 751-6849
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH: 661
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                                                                                                                                                                                                                                                                                                     Score 54; DB Pred. No. 2.3; 0; Mismatches
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Pred. No. 2.3;
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TOPOLOGY: Unknown

MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO:
US-09-898-860-78
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-047-539-4
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US-09-898-860-78
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Matches 8; Conserv
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FILE REFERENCE: VOS-27
CURRENT APPLICATION NUMBER: US/10/047,539
CURRENT FILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: ED 01 10 0914.9
PRIOR FILING DATE: 2001-01-16
NUMBER OF SEQ ID NOS: 13
                                                                                                                                         TELEX: 421792
INFORMATION FOR SEQ ID NO: 78:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
FILING DATE: «Unknown»
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: ASCII
CURRENT APPLICATION DATA:
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MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: MELANOMA ANTIGENS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           154 KTWGQYWQV 162
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
                                                                                TYPE: amino acid
STRANDEDNESS: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/898,860 FILING DATE: 03-Jul-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                      LENGTH:
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Pred. No. 2.3;
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RESULT 23
US-09-898-860-80
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Best Local S
Matches 7
 Sequence 80,
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                                                                                                                                                           Query Match
Best Local (
                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                  TELEX: 421792
INFORMATION FOR SEQ ID NO: 79:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 126
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                       MOLECULE TYPE: Peptide SEQUENCE DESCRIPTION: SEQ ID NO: 79:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: MELANOMA ANTIGENS AND
THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                         Similarity 7; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/09/267,439
FILING DATE: CUNKNOWN:
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/09/898,860 FILING DATE: 03-Jul-2001 APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
                                                                                                                                                                                                                                                     STRANDEDNESS: Unknown
TOPOLOGY: Unknown
                                                                                                                                                                                                                                                                                                LENGTH: 9
                                                                                                                                                                                                                                                                                                                                                                                                             NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
                                                                                                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 345 PARK AVENUE
   Application US/09898860
                                                                                                                                             Conservative
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                                                                                                                                                           86.2%;
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1; Mismatches

    Mismatches

                                                                                                                                                           Score 50;
Pred. No.
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4.4e+05;
                                                                                                                                                          4.4e+05;
                                                                                                                                                                        DB 12;
                                                                                                                                                                        Length 9;
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                                                                                                                                                                                                                       US-09-898-860-81
                                                                                                                                                                                                                                      RESULT 24
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Best Local Similarity
                                                                                                                                                                                                                                                                                     2 LWGQYWQV 9
STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH:
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STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 80:
US-09-898-860-80
                                                                                                                                                                         Sequence 81, Application US/09898860 Publication No. US20030144482A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Publication No. US20030144482A1
GENERAL INFORMATION:
APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: 421792
INFORMATION FOR SEQ ID NO: 80:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: FLOPPY DISK
COMPUTER: IEM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-Jul-2001
PRIOR APPLICATION NUMBER: US/09/267,439
FILING DATE: 4UNKNOWN>
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
                                                  APPLIANCE STEVEN A.

TITLE OF INVENTION: MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
                  NUMBER OF SEQUENCES: 126 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
                                                                                                                                                  APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
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ADDRESSEE: MORGAN & FINNEGAN, L.L.P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 345 PARK AVENUE CITY: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ADDRESSEE: MORGAN & FINNEGAN, L.L.P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            86.2%;
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Pred. No. 4.4e+05;
1; Mismatches (
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COMPUTER READABLE FORM:

MEDIUM TYPE: FLOPPY DISK

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US-09-898-860-82

Sequence 82, Application US/09898860; Publication No. US20030144482A1; GENERAL INFORMATION:
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Best Local Similarity
Matches 7; Conserv
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/09/898,860
FILING DATE: 03-Jul-2001
PRIOR APPLICATION UNMBER: US/09/267,439
FILING DATE: CURREN:
APPLICATION NUMBER: US/08/417,174
APPLICATION NUMBER: US/08/417,174
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                        ZIP: 10154

COMPUTER READABLE FORM;

MEDIUM TYPE: FLOPPY DISK

COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: ASCII

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-Jul-2001
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
FILING DATE: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 81:
                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 126
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: MELANOMA ANTIGENS AND THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                               STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
STRANDEDNESS: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                            COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: 421792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86.2%; Score 50; DB 12; Length 9; llarity 87.5%; Pred. No. 4.4e+05; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STEVEN A.
                                                                                                                                                                                                                                                                                                                                                                                                                                              METHODS
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Search completed: August 14, 2003, 09:25:45 Job time : 153 secs
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Best Local Similarity
Matches 7; Conserv
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INFORMATION FOR SEQ ID NO: 82:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                              TYPE: amino acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 82:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
                                                                                                                 2 VWGQYWQV 9
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                                                                                                                                                      Conservative
                                                                                                                                                                      86.2%;
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Pred. No. 4.4e+05;
1; Mismatches 0
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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of hits satisfying chosen parameters:
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length: 2000000000
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Match
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58
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GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd
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            TRK potassium upta
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	ALIGNMENTS					
pol polyprotein -	\$46347		1039		38	45
hypothetical prote	C64483		1009		38	44
phosphatidic acid-	T49470		1008		38	43
pol polyprotein -	S30484		65		38	42
pol polyprotein -	\$30483		65		38	41
histidine transpor	S46236		58		38	40
probable helicase	AH0785	2	586	65.5	38	39
yejH protein - Esc	G64987		58		38	38
probable ATP-depen	F85857		58		38	37
probable ATP-depen	D91013		58		38	36
histidine transpor	C84432		58		38	35
hypothetical prote	E96648		56		38	34
probable peptide/a	A84432		54		38	33
hypothetical prote	AF1903		39		38	32
sulphate transport	AH0811		27		38	31
hypothetical prote	AF1847		25		38	30

melanoma-associated ME20 antigen (me20m) - human N;Alternate names: melanoma antigen 25 C;Species: Homo sapiens (man) C;Date: 01-Nov-1996 #sequence revision 01-Nov-1996 #text_change 01-Dec-2000 C;Accession: I38400; A53668; Ā55753 R;Marseh, G.A.; Marken, J.S.; Neubauer, M.; Aruffo, A.; Hellstrom, I.; Hellstrom, K.; DNA Cell Biol. 13, 87-95, 1994 A;Title: Cloning and expression of the gene for the Melanoma-Associated ME20 Antigen. A;Reference number: I38400; MUID:94235165; PMID:8179825 A;Cross-references: EMBL:U01874; NID:g494939; PIDN:AAA18479.1; PID:g49494940 R;Adema, G.J.; de Boer, A.J.; Vogel, A.M.; Loenen, W.A.M.; Figdor, C.G. J. Biol. Chem. 269, 20126-20133, 1994 A;Title: Molecular characterization of the melanocyte lineage-specific antigen gp100. A;Reference number: A53668; MUID:94327568; PMID:7519602 á A; Molecule type: mRNA A; Residues: 1-161, 'F' C; Keywords: glycoprot A;Cross-references: GB:S73003; NID:g639589; PIDN:AAC60634.1; PID:g639590 R;Kawakami, Y.; Eliyahu, S.; Delgado, C.H.; Robbins, P.F.; Sakaguchi, K. Proc. Natl. Acad. Sci. U.S.A. 91, 6458-6462, 1994 A;Title: Identification of a human melanoma antigen recognized by tumor-A;Status: nucleic acid sequence not shown; not A;Reference number: A55753; MUID:94294401; PMID:8022805 A;Accession: A55753 A; Molecule type: mRNA A; Residues: 1-592,594-662 < ADE> A;Accession: A; Molecule type: mRNA A; Residues: 1-662 < RES> A;Status: preliminary; translated from GB/EMBL/DDBJ A; Accession: I38400 Matches Query Match POCGI glycoprotein 1-161,'F',163-592,594-662 <KAW> 1 KVWGQYWQV Similarity 8; Conserv A53668 Conservative 93.1%; 9 <u>,,</u> Score 54; I Pred. No. 0. Mismatches DB 2; . 67 ; compared with ۲. Length 662; Indels conceptual translation 0 tumor-infiltrating lymp Gaps <u>۲</u> Appella, E.; 0

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melanocyte-specific protein Pmel-17 precursor - human (Species: Homo sapiens (man) (C;Species: Homo sapiens (man) (C;Date: 19-Jun-1992 #sequence_revision 19-Jun-1992 #text_change 30-Sep-1993 (C;Accession: A41234 R;Kwon, B.S.; Chintamaneni, C.; Kozak, C.A.; Copeland, N.G.; Gilbert, D.J.; Jenkins, Proc. Natl. Acad. Sci. U.S.A. 88, 9228-9232, 1991 A;Title: A melanocyte-specific gene, Pmel 17, maps near the silver coat color locus of the second color second colors.

maps near the silver coat color locus on mc

Z :

RESULT A41234

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154 KTWGQYWQV 162

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R;Hayashi, T.; yasunaga, gasawara, N.; Yasunaga, gasawara 8, 11-22, 2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein BCs3110 [imported] - Escherichia coli (strain O157:H7, C;Species: Escherichia coli C;Species: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 18-Jul-2001 C;Accession: F91017
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hypothetical
                              H85861
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A;Cross-references: GB:BA000007; PIDN:BAB36533.1; PID:g13362579; GSPDB:GN00154
A;Experimental source: strain O157:H7, substrain RIMD 0509952
                                                                                                                                                                                                                                                                                                                                            A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli 0157:H7 A;Reference number: A99629; MUID:21156231; PMID:11258796 A;Accession: F91017 A;Accession: F91017 A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Kwon, B.S.; Halaban, R.; Ponnazhagan, S.; Kim, K.; Chintamaneni, C.; Bennett, D.; Pick Nucleic Acids Res. 23, 154-158, 1995. Aprille: Mouse silver mutation is caused by a single base insertion in the putative cyto A;Reference number: S53871; MUID:95175358; PMID:7870580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Species: Mus musculus (house mouse)
C;Date: 27-Oct-1995 #sequence_revision 03-Nov-1995 #text_change 05-Nov-1999
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                                               RESULT
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A; Residues: 1-626 < KWO>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary
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                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
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                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                  T.; Makino, K.; Ohnishi, M.; Kurokawa, K.; Ishii, K.; Yokoyama, K.;
N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori, M.; Shinagawa, H.
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          protein Z3480 [imported] - Escherichia coli (strain O157:H7, substrain
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Pred. No.
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A;Molecule type: DNA
A;Residues: 1-305 <NIEs
A;Residues: 1-305 <NIEs
A;Cross-references: EMBL:Z34000; NID:g496485; PIDN:CAA83969.1; PID:g496488
A;Cross-only a part of the coding sequence is given in this paper
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, Ma;
C;Superfamily: Methanococcus jannaschii conserved hypothetical protein MJO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:AE000312; GB:U00096; NID:gl788555; PIDN:AAC75286.1; A;Experimental source: strain K-12, substrain MG1655 C;Superfamily: Escherichia coli hypothetical protein b2226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7 A;Reference number: A85480; MUID:21074935; PMID:11206551 A;Accession: H85861
                                                                                                                                                           A;Title: The primary structure of two chlorosome proteins from A;Reference number: S43678; MUID:94192803; PMID:7511541 A;Accession: S52775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12
A;Reference number: A64720; MUID:97426617; PMID:9278503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein b2226 - Escherichia coli (strain K-12)
C;Species: Escherichia coli
C;Species: Escherichia coli
C;Date: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 01-Mar-2002
C;Accession: H64992
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C;Date: 16-Feb-2001 #sequen
                                                                                                                                      A; Status: preliminary
                                                                                                                                                                                                                                 FEBS Lett.
                                                                                                                                                                                                                                   R;Niedermeier, G.; Shiozawa, J.A.; Lottspeich, FEBS Lett. 342, 61-65, 1994
                                                                                                                                                                                                                                                                                C;Accession: S52775
                                                                                                                                                                                                                                                                                               C; Date: 10-Sep-1999 #sequence_revision
                                                                                                                                                                                                                                                                                                                         hypothetical protein 2 - Chloroflexus aurantiacus C;Species: Chloroflexus aurantiacus
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A; Residues: 1-549 <BLAT>
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.A.; Rose, D.J.; Mau,
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A;Experimental source: strain O157:H7, substrain EDL933
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R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.;
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  Library, May 1994
protein MJ0279
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C;Date: 31-Dec-1990 #sequence revision 31-Dec-1990 #text_change 01-Mar-2002 C;Accession: A35402; G65016; B35403 C;Accession: A35402; G65016; B35403 R;Sirko, A.; Hryniewicz, M.; Hulanicka, D.; Boeck, A. J. Bacteriol. 172, 3351-3357, 1990 A;Title: Sulfate and thiosulfate transport in Escherichia coli K-12: nucleo A;Reference number: A35402; MUID:90264334; PMID:2188958
                  R;Hryniewicz, M.; Sirko, A.; Palucha, A.; Boeck, A.; Hulanicka, J. Bacteriol. 172, 3358-3366, 1990
A;Tille: Sulfate and thiosulfate transport in Escherichia coli A;Reference number: A35403; MUID:90264335; PMID:2188959
                                                                                                                                                                                                                                             Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12.
A;Reference number: A64720; MUID:97426617; PMID:9278503
A;Accession: G65016
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                                                                                                                     A;Cross-references: GB:AE000330; GB:U00096; NID:g1788763; A;Experimental source: strain K-12, substrain MG1655
                                                                                                                                                                                              A; Molecule type: DNA
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A;Experimental source: serogroup O1; strain N16961; biotype El Tor
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A;Accession: A82104
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;Experimental source: strain K12
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Accession: A82104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
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Best Local
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                                                                                                                                                                       1-277 <BLAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 KVWGQYW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 VWGQYW 7
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Similarity 71.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ELWGQYW 103
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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83.3%;
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                    in Escherichia coli K-12: identification PMID:2188959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in Escherichia coli K-12: nucleotide sequence PMID:2188958
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15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2;
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                                                                                                                                             PIDN:AAC75477.1; PID:g1788764
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Matches
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R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, M.B. deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, G.; il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barrell,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF0366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Gene: CysU; CysT
A;Gene: CysU; CysT
A;Map position: 52 min
C;Superfamily: maltose transport protein malG
C;Keywords: binding protein-dependent transport system; inner membrane; membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Residues: \bar{1}-126,'F',128-133 <HRY> C;Comment: This is one of the membrane-associated components of the binding protein-dependence:
                                                           A;Gene: cysT
C;Superfamily: maltose transport protein malG
                                                                                                                                                                                                                                                                                                                                                             C;Species: Yersinia pestis
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Nov-2001
C;Accession: AF0366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R; Hayashi, T.;
                                                                                                                                                                                                                                      A;Title: Genome sequence of Yersinia pestis, the causative agent of plague A;Reference number: AB0001; MUID:21470413; PMID:11586360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:BA000007; PIDN:BAB36718.1; A;Experimental source: strain O157:H7, substrain I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Res. 8, 11-22, 2001

A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and A;Reference number: A99629; MUID:21156231; PMID:11258796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change
C;Accession: G91040
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                                                                                                                                                              A;Molecule type: DNA
A;Residues: 1-277 <KUR:
                                                                                                                                                                                                                       A; Accession: AF0366
                                                                                                                                                                                                                                                                                       Nature 413, 523-527, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                          sulfate transport system permease protein CysT cysT [imported] - Yersinia pestis
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                                                                                                                                                            ;Residues:
                                                                                                                                                                                                  Status: preliminary
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                                                                                                                      Genetics:
                                                                                                                                           ;Cross-references: GB:AL590842; PIDN:CAC92257.1;
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Best Local
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Similarity 5; Conserv
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Kasunaga, T.; Kuhara, S.; Shiba, T.; Hattori,
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71.4%;
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71.4%;
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Pred. No.

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                   Score 40;
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41;
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41;
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RIMD 0509952
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; Hattori, M.; Shinagawa,
                                                                                                                                       PID:g15980968; GSPDB:GN00175
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Conservative

Mismatches

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RESULT 14
A39862
protein-tyrosine-phosphatase (EC 3.1.3.48), nonrece W;Alternate names: protein D0815; protein YDL230w C;Species: Saccharomyces cerevisiae C;Date: 30-Dec-1991 #sequence_revision 08-Mar-1996 C;Accession: A39862; S67793 R;Guan, K.; Deschenes, R.J.; Qiu, H.; Dixon, J.E.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Accession: AG0018
R;Parkhill, J.; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, M.B deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, G.; il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barrell, Nature 413, 523-527, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hypothetical protein YPO0146 [imported] - Yersinia pestis (strain w//)
C;Species: Yersinia pestis
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 02-Nov-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sulfate transport system permease T protein ECs3295 [imported] - C;Species: Escherichia coli C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 2 C;Accession: B85885
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A;Cross-references: GB:AE005174; NID:g12516799; PIDN:AAG57542.1;
A;Experimental source: strain O157:H7, substrain EDL933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Reference number: A85480; A; Accession: B85885
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                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary
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Pred. No.
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                                                                                               nonreceptor type
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41;
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                                        21-Jul-2000
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                  C;Species: Agrobacterium tumefaciens C;Date: 22-Oct-2001 #sequence_revision C;Accession: A96183
R;Goodner, B:, Hinkle, G:; Gattung, S:;
A:; Liu, F:; Wollam, C:; Allinger, M.;
Science 294, 2323-2328, 2001
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    A; Title: Genome
                                                                                                                                     D-ribulokinase (EC 2.7.1.47) [imported] - Agrobacterium tumefaciens (strain
                                                                                                                                                          A96183
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Sequence

of the

Plant Pathogen and Biotechnology Agent Agrobacterium tum-

S.; Miller, N.; Blanchard, M.; Qurollo, M.; Doughty, D.; Scott, C.; Lappas, C.;

B.; Goldm Markelz,

Goldman, kelz, B.;

22-Oct-2001

#text_change 18-Nov-2002

C58,

Cereon)

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RESULT 15
S76446
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A; Residues: 1-335 < RAS>
A; Cross-references: EMBL: Z74278; NID: g1431387;
A; Cross-references: strain S288C
                                                                                                                                                                                                                                                                                                                                                                   R;Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.; Nakamura, Y.; Miyajima, o, K.; Okumura, S.; Shimpo, S.; Takeuchi, C.; Wada, T.; Watanabe, A.; Yamada, M.; YaDNA Res. 3, 109-136, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Synechocystis sp.
A;Variety: PCC 6803
C;Date: 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change 08-Oct-1999
C;Accession: S76446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Map position: 4L
C;Superfamily: Saccharomyces protein-tyrosine-phosphatase, nonreceptor type 1; protein-ty
C:rawwords: nhosphonrotein; phosphoric monoester hydrolase; tyrosine-specific phosphatas:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Keywords: phosphoprotein; phosphoric monoester hydrolase; tyr F;52-303/Domain: protein-tyrosine-phosphotase homology <PTP>F;52-303/Domain: protein-tyrosine-phosphotase homology <PTP>F;252/Active site: Cys (phosphotysteine intermediate) #status p F;258/Binding site: substrate phosphote (Arg) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Reference number: S67778
A;Accession: S67793
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Cloning and expression of a yeast protein tyrosine A;Reference number: A39862; MUID:91302312; PMID:1649172 A;Accession: A39862
                                                                                                                                                                          A;Cross-references: EMBL:D90915; GB:AB001339; A;Note: the nucleotide sequence was submitted
                                                                                                                                                                                                                                             A; Molecule type: DNA
                                                                                                                                                                                                                                                                                       A;Reference number: S74322; MUID:97061201; PMID:8905231 A;Accession: S76446
                                                                                                                                                                                                                                                                                                                                                        A; Title: Sequence analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hypothetical protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Cross-references: SGD: S0002389; MIPS: YDL230w
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A; Residues: 1-335 < GUA>
                                                                                                                                                                                                                         A;Residues: 1-400 <KAN>
                                                                                     Matches
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335 WGQYW
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                                                                                     Similarity 5; Conserv
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  339
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55.6%;
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                                                                                                          Score 40;
Pred. No.
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Pred. No. 49;
                                                                                     red. No. 58;
Mismatches
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                                                                                                                                                                          NID:g1653604; PIDN:BAA18575.1; to the EMBL Data Library, June
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIDN: CAA98809.1;
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C;Accession: E96681

R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; nous, C.,
Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000

A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.;
C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Ma
Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; 7

ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
                                                                                                                                                                                                                                                                                           protein F1E22.4 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: DNA
A;Residues: 1-525 <KUR>
A;Cross-references: GB:AE008689; PIDN:AAL45247.1; PID:g17742931; GSPDB:GN00187
A;Experimental source: strain C58 (Dupont)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Title: The Genome of the Natural Genetic A;Reference number: ABZ577; MUID:21608550; A;Accession: AI3103
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C;Accession: AI3103
R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.E.; Chen, erage, G.; Gillet, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; Karp, P.; Romero, P.; Zhang, S.
Science 294, 2317-2323, 2001
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C;Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 18-Nov-2002
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A;Accession: A96183
A;Status: preliminary
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A;Cross-references: GB:AE007870;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
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                      Status: preliminary
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Best Local :
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5; Conserv
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71.4%;
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Pred. No.
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Pred.
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Dewar, K.;
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C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Dec-2002 C;Accession: AH2138 R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Irigu Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata DNA Res. 8, 205-213, 2001 A;Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium A;Reference number: AB1807; MUID:21595285; PMID:11759840 A,Accession: AH2138
                                                                                                                                                                                                                                                                  R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; B.A.; Rose, D.J.; Mau, B.; Shao, Y.
Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli K-12.
A;Reference number: A64720; MUID:97426617; PMID:9278503
A;Accession: F64844
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AH2138
                                                                                                                                                      A;Cross-references: GB:AE000204; GB:U00096; NID:gl787256; PIDN:AAC74109.1; A;Experimental source: strain K-12, substrain MG1655 C;Genetics:
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A;Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change
                                                                                                                A; Gene: ycdS
C; Superfamily
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C; Genetics:
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                                                                                                                                                                                                                                                    A;Status: nucleic acid sequence
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C;Species: Escherichia coli
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A;Experimental source: strain PCC 7120
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A; Residues: 1-580 < KUR>
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A;Map position: 1
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                                                                        ;Superfamily: Escherichia coli ycdS protein
;1-26/Domain: signal sequence #status predicted
;27-807/Product: ycdS protein #status predicted
  Matches
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Best Local Similarity
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                    69.0%;
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71.4%;
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Pred. No.
                    Score 40;
Pred. No.
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Tabata, S
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A;Gene:
C;Superf
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F85647
                                                     protein F20H11.2 [imported] - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 10-May-2001
C;Accession: D88486
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   probable outer membrane protein ycdS [imported] - Escherichia coli (strain 0157:H7, C;Species: Escherichia coli
C;Species: Escherichia coli
C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 14-Sep-2001
C;Accession: F85647
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A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7
A:Reference number: A99629; MUID:21156231; PMID:11258796
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                  R; anonymous, The C. ele
Science 282, 2012-2018,
                                                                                                                                      D88486
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A, Accession: F85647
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C;Superfamily: Escherichia coli ycdS protein
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A;Experimental source: strain 0157:H7, substrain RIMD 0509952
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A; Residues: 1-807 < HAY>
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Best Local :
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Kasunaga, T.; Kuhara, S.;
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ilarity 100.0%;
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nematode C. elegans: a platform
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Shiba, T.;
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M.; Shinagawa,
for investigating biolog
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A; Residues:
A; Cross-refe
C; Genetics:
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A;Title: Complete Genome Sequence of Caulobacter crescentus.
A;Reference number: A87249; MUID:21173698; PMID:11259647
A;Accession: B87339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             conserved hypothetical protein CC0725 [imported] -
C;Species: Caulobacter crescentus
C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001
C;Accession: B87339
                                                             A;Cross-references: EMBL:U88974; NID:g2444080; PID:g2444131; PIDN:AAC79567.1 A;Experimental source: host Streptococcus thermophilus strain CNRZ1205 C;Superfamily: Streptococcus phage phi-O1205 hypothetical protein 53
                                                                                                                                                                                                       A;Title: Sequence analysis and characterization of phi 01205, A;Reference number: Z17654; MUID:98048466; PMID:9387220 A;Accession: T13342
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C;Superfamily: Synechocystis hypothetical protein sll1442
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A;Molecule type: DNA
A;Residues: 1-114 <STO>
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A; Map position:
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A;Note: see websites genome.wustl.edu/gsc/C_elegans/ and
A;Note: published errata appeared in Science 283, 35, 19
                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-145 < STA>
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C;Accession: T13342
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C;Species: Streptococcus phage phi-01205
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P16701 escherichia
P25044 saccharomyc
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P19145 saccharomyc
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Q98917 gallus gall
Q14920 homo sapien
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	bacteriopha	bacteriopha	arabidopsis	arabidopsis	arabidopsis	sus scrofa	homo sapien	bos taurus	human immun	human immun	human immun	human immun

ALIGNMENTS

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SEQUENCE FROM N.A. KWON B.S., Kim K., Heng H.H., Shi X.M., Tsui L., Lee Z.H., YOUN B., Pickard R.T.; Submitted (JAN-1996) to the EMBL/GenBank/DDBJ databases. [6] SEQUENCE FROM N.A. Vogel A.; Submitted (NOV-1990) to the EMBL/GenBank/DDBJ databases.	DLINE=9 Cesh G. lstrog oning igen.'	MEDLINE=96154052; PubMed=8592076; MEDLINE=96154052; PubMed=8592076; Bailin T., Lee S.T., Spritz R.A.; "Genomic organization and sequence of D12853E (Pmel 17), the human homologue of the mouse silver (si) locus."; J. Invest. Dermatol. 106:24-27(1996).	SEQUENCE FROM N.A. SEQUENCE FROM N.A. MEDLINE=94327568; PubMed=7519602; Medema G.J., de Boer A.J., Vogel A.M., Loenen W.A., Figdor C.G.; "Molecular characterization of the melanocyte lineage-specific antigen gpl00.", antigen gpl00.", J., Biol. Chem. 269:20126-20133(1994).	SEQUENCE FROM N.A. SEQUENCE FROM N.A. MEDLINE=92021023; PubMed=1924386; KWOTH B.S., Chintemaneni C., Kozak C.A., Copeland N.G., Gilbert D.J., Jenkins N.A., Barton D., Francke U., Kobayashi Y., Kim KK.; "A melanocyte-specific gene, Pmel 17, maps near the silver coat color locus on mouse chromosome 10 and is in a syntenic region on human chromosome 12."; Proc. Natl. Acad. Sci. U.S.A. 88:9228-9232(1991).	T 1 HUMAN FMIT HUMAN FMIT HUMAN FMIT HUMAN PAOSG7; Q12763; Q14448; Q14817; Q16565; P4095(Rel. 31, Created) O1-FEB-1995 (Rel. 35, Last sequence update) O1-CCT-2001 (Rel. 40, Last annotation update) 16-CCT-2001 (Rel. 41, Last annotation update) Melanocyte protein Pmel 17 precursor (Melanocyte lineage-specific antigen GF100) (Melanoma-associated ME20 antigen) (ME20M/ME20S) (ME20-M/ME20-S) (95 kDa melanocyte-specific secreted glycoprotein). SILV OR PMEL17 OR D12S51E. Homo sapiens (Human). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBI TaxID=9806;

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EMBL; M77348; EMBL; S73003; EMBL; U31808; EMBL; U31808; EMBL; U31807; EMBL; U31977; EMBL; U31797; EMBL; U31797; EMBL; U31798; EMBL; U31799; EM
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AAB00386.1;
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AAC60634.1; -.
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                 L -> P (IN REF. 1 AND 5).

P -> PVPGILLT (IN REF. 1).

G -> G (IN REF. 4).

P -> R (IN REF. 4).

RIFCSCDIGENSPLLSGQQV -> ASSALVPLVRIAPSSVG
SRSEYSHMML (IN REF. 6).
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8A904FAB16715653 CRC64;
                                                                                                                                                                                                          (GLCNAC...)
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(GLCNAC...)
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PM17 MOUSE
Q60696;
                                                                                                                                                                                                                                                                                                                          between the Swiss Institute. There are the European Bioinformatics Institute. There are the European Bioinformatics Institute as its content is in use by non-profit institutions as long as its content is in not removed. Usage by and for commercial series and this statement is not removed. Usage by and for commercial series are sement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                       putative cytoplasmic domain of Pmei 17.";

Nucleic Acids Res. 23:154-158 (1995).
-!- FUNCTION: COULD BE A MELANOGENIC ENZYME.
-!- SUBCELLULAR LOCATION: Type I membrane protein (Potential).
-!- TISSUB SPECIFICITY: PREFERENTIALLY EXPRESSED IN MELANOCYTES.
-!- DISEASE: DEFECTS IN SILV ARE THE CAUSE OF THE SILVER COAT COLOR
-!- DISEASE: DEFECTS IN SILV ARE THE CAUSE OF THE SILVER COAT COLOR
THE HAIR CYCLE.
-!- SIMILARITY: BELONGS TO THE PMEL-17/NMB FAMILY.
-!- SIMILARITY: Contains 1 PKD domain.
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DOMAIN
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01-NOV-1997 (Rel. 35, Last sequence up
28-FEB-2003 (Rel. 41, Last annotation
Melanocyte protein Pmel 17 precursor (
SILV OR PMEL17 OR D10H12S53E OR SI.
                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                        InterPro; IPR000601; I
Pfam; PF00801; PKD; 1.
SMART; SM00089; PKD; 1
                                                                                                                                                                                                                                                                             EMBL; U14133; AAA69538.1;
PIR; S53871; S53871.
MGD; MGI:98301; Si.
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Bennett D., Pickard R.T.
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MEDLINE=95175358; PubMed=7870580;
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Mouse silver mutation is caused by a single base insertion in putative cytoplasmic domain of Pmel 17.";
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Transmembrane; Glycoprotein;
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een the Swiss Institute of Bioinformatics and the EMBL outst
European Bioinformatics Institute. There are no restrictions
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88.9%;
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Pred. No.
                                                                                                                                                         POTENTIAL.
MELANOCYTE PROTEIN PMEL
EXTRACELLULAR (POTENTIAL
                                                                                                                                                                                                               Signal; Melanin biosynthesis; Repeat;
 N-LINKED (GLCNAC.
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                                                                                                                                               POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-97426617; PubMed-9278503;
Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burl
Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew
Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=K12 / MG169
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                                                                                                                                                                                                                                                                                                    Similarity 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
HYPOTHETICAL PROTEIN YFAQ
, 72C26716D953C9D1 CRC64;
                                                                                                                                                                                                                                                                                                                                   Score 49;
Pred. No.
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15-JUL-1998 (Rel. 36
16-OCT-2001 (Rel. 40
115 kDa melanosomal 1
                                     CARBOHYD
SEQUENCE
                                                               CARBOHYD
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REPEAT
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                                                                                                                                                                                                          Signal;
SIGNAL
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"Expression of gene coding for a melanosomal matrix protein
transcriptionally regulated in the transdifferentiation of chick
embryo pigmented epithelial cells.";
Cell Differ. 24:67-74(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-White leghorn; TISSUE-Retinal pigment epithelium, MEDLINE-92020667; PubMed-1924173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                CHAIN
DOMAIN
                                                                                                                                                                                                                                                            InterPro; IPR000601; |
Pfam; PF00801; PKD; 1
                                                                                                                                                                                                                                                                                                             entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                     use by non-profit institutions as long as its content modified and this statement is not removed. Usage by ar
                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. between the Swiss Institute of Bioi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -1- FUNCTION: MIGHT BE REQUIRED FOR POLYMERIZATION OF MELANIN ONTO THE CORE STRUCTURE OF MELANOSOMES WITH ENZYMIC FUNCTION OF TYROSINASE.
-1- SUBCELLULAR LOCATION: ON THE FIBROUS MATRIX STRUCTURE OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=White leghorn; TISSUE=Retinal pigment MEDLINE=88311098; PubMed=3409326;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115-kDa melanosomal matrix protein.";
Pigment Cell Res. 4:41-47(1991).
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                                                                                                                                                                                                                                                                                                                                                                 between the Swiss Institute of Bioinf
the European Bioinformatics Institute.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Complete sequence and expression of
                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: BELONGS TO THE SIMILARITY: Contains 1 PKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PREMELANOSOME.
TISSUE SPECIFICITY: SPECIFIC TO PIGHELANOCYTES. NOT EXPRESSED IN LENS,
GIZZARD OR LIVER.
                                                                                                                                                                                                                                                                                                                                                                                                                                              PIM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEVELOPMENTAL STAGE: EXPRESSEDED PIGMENTED EPITHELIAL CELLS (PEC).
                                                                                                                                                                                                                                                SM00089; PKD;
                                                                                                                                                                                                                        Glycoprotein;
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(Rel. 36, Last sequence up
(Rel. 40, Last annotation
anosomal matrix protein pre
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                                       AA;
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                                        W.
                                     N-LINKED (GLCNAC...
 Score 45;
Pred. No.
                                                                                                                                                                   115 KDA MELANOSOMAL MATRIX PROTEIN.
PKD.
4 X 20-24 AA APPROXIMATE TANDEM REPEATS
                                                                                                                                                                                                           POTENTIAL
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; Galliformes; Phasianidae; Phasianinae;
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                                                                                                                                                                                                                                                                                                                                                                            ght. It is produced through a collaboration Bioinformatics and the EMBL outstation -
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N LENS, NEURAL RETINA,
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             Length 762
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Gaps

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162

WGRYWQV 168

WGQYWQV

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XX MEDLINE=22388257; PubMed=12477932;

XS trausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

XA Klausner R.D., Collins F.S., Wagner L., Schenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

XA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

XA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

XA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

XA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang L.,

XA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang L.,

XA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

XA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

XA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

XA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

XI Nilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

XA Fahey J., Hellon E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

XA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

XA Hopkins R.W., Touchman J.W., Green E.D., Dickson M.C.,

XA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

XA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

XA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,

**Generic M.** And M. A.,

**Generic M.** And M.** A
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
15-SEP-2003 (Rel. 42, Last annotation update)
Inhibitor of nuclear factor kappa B kinase beta subunit (EC 2.7.1.-)
[1-kappa-B-kinase beta] (IKK-B) (IKK-beta) (IKK-B) (I-kappa-B kinase
(I-kappa-B-kinase beta) (NFKBIKB)
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                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=Lung;
MEDLINE=22388257;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shindo M., Nakano H., Sakon S., Yagita H., "Assigmment of IkappaB kinase beta (IKBKB) 8p12-->p1 by in situ hybridization."; Cytogenet. Cell Genet. 82:32-33(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hu M.C.-T., Wang Y.-P.;
"IkappaB kinase-alpha and -beta embryonic tissues but localized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Woronicz J.D., Gao X., Cao Z., Rothe M., Goeddel D.V.; "IkappaB Kinase-beta: NF-KappaB activation and complex formation with IkappaB kinase-alpha and NIK."; Science 278:866-869(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Li J.W., Young D.B., Balbuba W., ..... TRK-1 and IKK-2: cytokine-activated IkappaB "IKK-1 and IKK-2: cytokine-activated IkappaB NF-kappaB activation.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., AND MUTISSUE=Cervical carcinoma;
MEDLINE=98008813; PubMed=9
Mercurio F., Zhu H., Murra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=9813230;
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Catarrhini;
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i; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mihara M., Okumura I
to human chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   kinases essential
15,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SER-177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bennett B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Α.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
; Homo.
  full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Okumura K.;
nromosome band
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AND SER-181.
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GO; GO:0005737;
GO; GO:0005524;
GO; GO:0004674;
GO; GO:0016563;
GO; GO:0006468;
                                                                                                                                                                                                                                                                         EMBL;
                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ethe European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOI. Cell. Biol. 22:3549-3561(2002).

-!- FUNCTION: Phosphorylates inhibitors of NF-kappa-B thus leading the dissociation of the inhibitor/NF-kappa-B complex and """ imaraly the degradation of the inhibitor. Also phosphorylate
                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jobin C., Sartor R.B.;
"The I kappa B/NF-kappa B system: a inflammation and protection.";
Am. J. Physiol. 278:C451-C462(2000).
[8]
             ProDom; PD000001; Prot kinase; 1.
PROSITE; PS001107; PROTEIN KINASE ATP;
PROSITE; PS001108; PROTEIN_KINASE_DOM;
PROSITE; PS50011; PROTEIN_KINASE_DOM;
                                                                Pfam; PF00069; pkinase; I.
Pfam; PF00240; ubiquitin;
                                                                                             GO; GO:0005737; C:cytoplasm; NAS.
GO; GO:0005524; F:ATP binding activity; NAS.
GO; GO:0004674; F:protein serine/threonine kinase
GO; GO:0016563; F:transcriptional activator activi
GO; GO:0016468; P:protein amino acid phosphorylati
InterPro; IPR000719; Prot kinase.
InterPro; IPR000719; Prot kinase.
                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Regulation of SRC-3 (pCIP/ACTR/AIB-1/RAC-3/TRAM-1) activity by I kappa B kinase.";
Mol. Cell. Biol. 22:3549-3561(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wu R.C., Qin J.,
O'Malley B.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nemoto S., DiDonato J.A., Lin A., "Coordinate regulation of IkappaB kinases by makinase kinase land NF-kappaB-inducing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=21968797;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=20178139; PubMed=10712233;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:
                                                                                                                                                                                                                               HSSP; Q63450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REVIEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DENTIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           muscle, kidney, p
peripheral blood.
PTM: Phospho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complex.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBUNIT: Preferentially found as a heterodimer with IKK-alpha but also as a homodimer. Directly interacts with IKK-gamma/NEMO. Heterodimers form the active complex. The tripartite complex can also bind to MEKKI, MAP3KI4/NIK, IKAP and IKB-alpha-P65-P50 complex. Phosphorylated IKB-alpha is further released from the
                                                                                                                                                                                                                                                                                                                                                                                                                                  Weakly autophosphorylated.
SIMILARITY: BELONGS TO THE
IKAPPAB KINASE SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Cytoplasmic. TISSUE SPECIFICITY: Highly expressed muscle, kidney, pancreas, spleen, thy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ultimately the degradation of NCOA3 (By similarity).
                                                                                                                                                                                                    603258;
                                                                                                                                                                                                                                                          AF029684;
AF080158;
AF031416;
                                                                                                                                                                                                                                              BC006231;
                                                                                                                                                                                                                  HGNC:5960; IKBKB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CREBBP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Phosphorylated by MEKK1 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biol. 18:7336-7343(1998).
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                                                                                                                                                                                                                                           AAC51860.1; -. AAC5186997.1; -. AAC64675.1; -. AAC64675.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IN A COMPLEX WITH C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hashimoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=9819420;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
                                                                                          Prot_kinase.
Ser_thr_pkinase
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complex
                                                                                                                            iptional activator activity; amino acid phosphorylation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 SER/THR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  composed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CREBBP; NCOA2; NCOA3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              probably
                                        FALSE_NEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thymus,
                                                                                                                                                                                                                                                                                                                                  (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                   FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Xu J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            determinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        in heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of NCOA2, NCOA3, IKKA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                by mitogen-activated
cing kinase.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               also
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROTEIN KINASES
                                                                                                                                                         activity;
                                                                                                                                                                                                                                                                                                                                                                                                         through a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               by MAP3K14/NIK.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          coactivator
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                                                                                                                                                                                                                                                                                                                                                                            restrictions
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                                                                                                                                                                                                                                                                                                                                                                                                         collaboration
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Fransierase;

Serine/threonine-protein

kinase; ATP-binding;

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RESULT
IKKB_MC
 PRRETTING
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Best Local S
Matches 6
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083351; 0981J6;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
17-KEB-2003 (Rel. 41, Last annotation update)
18-FEB-2003 (Rel. 41, Last annotation update)
18-FEB-2003 (Rel. 40, Last sequence update)
18-FEB-2003 (Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dhosphorylation.
DOWAIN 15
DOWAIN 458
DOWAIN 737
NP BIND 21
BINDING 44
BINDING 145
ACT SITE 145
ACT SITE 23
MOD_RES 177
MOD_RES 177
MOD_RES 181
MUTAGEN 44
                                                                      MEDLINE=99455228; PubMed=10523828;
Hu M.C.-T., Wang Y.-P., Qiu W.R., Mikhail A., Meyer C.F., Tan T.-H.
"Hematopoietic progenitor kinase-1 (HPK1) stress response signaling
pathway activates IkappaB kinases (IKK-alpha/beta) and IKK-beta is developmentally regulated protein kinase.";
Oncogene 18:5514-5524(1999).
                                                                                                                                                                                                                    SEQUENCE FROM N.A.

Hu M.C.-T., Wang Y.-P., Mikhail A., Qiu W.R.;

"Murine IkB kinase-B, a developmentally regulated protein constitutively phosphorylates serine residues of IkB.";

Submitted (AUG-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
SEQUENCE
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NP BIND
BINDING
ACT_SITE
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SEQUENCE FROM N.A., AND PH
SEQUENCE FROM N.A., AND PH
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                                                                                                                                           MEDLINE=99455228; PubMed
                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=C57BL/6; T:
MEDLINE=98188238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                               upstream
                   MEDLINE=99038238;
                                                                                                                                                                                    DEVELOPMENTAL STAGE
                                                                                                                                                                                                                                                                                                                                                                                             "Differential regulation
                                                                                                                                                                                                                                                                                                                                                                                                                      Okumura K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Nakano H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090;
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                                     KK PHOSPHORYLATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           musculus
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                                                                                                                                                                                                                                                                                                                                                           kinase/ERK
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038238; PubMed=9819420;
DiDonato J.A., Lin A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Mouse)
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                                                                                                                                                                                                                                                                                                                                    NF-kappaB-inducing kinase and K kinase kinase-1."; Sci. U.S.A. 95:3537-3542(1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                    PubMed=9520401;
M., Sakon S., Nishinaka
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177
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145
177
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85.7%;
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Pred. No. 29;
0; Mismatches
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CNPSTLGGRGRWI (IN REF. 5).
Q -> H (IN REF. 1).
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5->A: DECREASE OF ACTIVITY.
S->E: FULL ACTIVATION.
5->E: FULL ACTIVATION.
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LEUCINE-ZIPPER (POTENTIAL).
NEMO-BINDING.
ATP (BY SIMILARITY).
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BY SIMILARITY
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Sciurognathi;
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SIMILARITY).
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29;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEKK1
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                                                                                                                                                                                                                                                                                                                                                                             and mitogen-activated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Muridae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Mihara
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                                                                                                                                                                                                                                                                 kinase
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Mol. Cell.
REVIEW.
                                                   "Coordinate regulation of IkappaB kinases by mitogen-activated protein kinase kinase kinase 1 and NF-kappaB-inducing kinase.";
Mol. Cell. Biol. 18:7336-7343(1998).
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"The I kappa B/NF-kappa MEDLINE=20178139; PubMed=10712233; Jobin C., Sartor R.B.; inflammation and protection J. Physiol. 278:C451-C462(2000).
FUNCTION: Phosphorylates inhibitors of NF-kappa-B runction of the inhibitor/NF-kappa-B complete dissociation of the inhibitor. Also w system: a key determinant of thus lex an phosphorylates mucosal and leading ç

NCOA3.
SUBUNIT: Preferentially found as a heterodimer with IKK-alpha also as a homodimer. Directly interacts with IKK-gamma/NEMO.
Heterodimers form the active complex. The tripartite complex c also bind to MEKK1, MAP3K14/NIK, IKAP and IKB-ALPHA-P65-P50 complex. Phosphorylated IKB-alpha is further released from the complex. Found in a complex composed of NCOA2, NCOA3, IKKA, I and CREBBP (By similarity).
SUBCELLULAR LOCATION: Cytoplasmic IKBKG can but

TISSUE SPECIFICITY: Expressed in liver, kidney and spleen.
DEVELOPMENTAL STAGE: While it is expressed ubiquitously throughout
the mouse embryo, at E9.5 day its expression begins to be
localized to the brain, neural ganglia, neural tube, and in liver
at E12.5 day. At E15.5 day, the expression is further restricted
to specific tissues of the embryo.
PTM: Phosphorylated by MEKKI and probably also by MAPJK14/NIK.
Weakly autophosphorylated.
SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES.

IKAPPAB KINASE SUBFAMILY.

EMBL

ğ

collaboration outstation

way

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Phosphorylation.
DOMAIN 15
DOMAIN 458
DOMAIN 737
NP BIND 21
BINDING 44
ACT_SITE 145
MOD_RES 177
MOD_RES 177
MOD_RES 181
CONFLICT 343
CONFLICT 356
CONFLICT 390
CONFLICT 5736 PRINTS; PRO0109; TYRKINASE.

PRODOM; PD000001; PROTE kinase; 1.

PROSITE; PS00100; PROTEIN KINASE ATP;

PROSITE; PS00108; PROTEIN KINASE ST;

PROSITE; PS50011; PROTEIN KINASE DOM; EMBL; InterPro; IPR000719; Prot_kinase. InterPro; IPR002290; Ser_thr_pkir InterPro; IPR001245; Tyr_pkinase. Pfam; PF00069; pkinase; T. Transferase; MGD; MGI:1338071; Ikbkb AF026524; AF088910; Q63450; Serine/threonine-protein 1A06. AAC23557.1; AAD52095.1; 7479 7479 7429 7429 7444 7577 7577 7573 kinase. Ehr_pkinase. . . BY SIMILARITY.
PHOSPHORYLATION
PHOSPHORYLATION
PHOSPHORYLATION N -> D
N -> D
N -> D
K -> E
L -> F
P -> Q
K -> R
TLDWSWL
2). ATP ATP PROTEIN KINASE. LEUCINE-ZIPPER (BY SIMILARITY). QMEDEERCSLEQACD kinase; ATP-binding; FALSE_NEG REF. (POTENTIAL) (BY (BY (BY 2). 2). 2). 2). 2). (SIMILARITY) (SIMILARITY) (SIMILARITY) ů VTA ίN REF

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RESULT 7
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Q9QY78;
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zhang Y.,
"IKK beta
             EMBL;
                                                                                                                                    This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Inhibitor of nuclear factor kappa B kinase beta subunit (EC 2.7.1.-)
(I-kappa-B-kinase beta) (IKRKB) (IKK-beta) (IKK-B) (1-kappa-B kinase)
2) (IKK2) (Nuclear factor NF-kappa-B inhibitor Financh beta)
                                                   use by non-profit institutions as long modified and this statement is not removed entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                         the
                                                                                                                    between
                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20178139; PubMed=10712233; Jobin C., Sartor R.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nemoto S., DiDonato J.A., Lin A.; "Coordinate regulation of IkappaB kinases by mitogen-activated protein kinase kinase kinase l and NF-kappaB-Inducing kinase."; mol. Cell. Biol. 18:7336-7343 (1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                         inflammation and protection."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=99038238;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KBKB OR
                                                                                                                                                                         Weakly autophosphorylated. SIMILARITY: BELONGS TO THE SER/THR
                                                                                                                                                                                                                                                                  SUBUNIT: Preferentially found as a heterodimer with IKK-alpha but also as a homodimer. Directly interacts with IKK-gamma/NEWO. Also as a homodimer. Directly interacts with IKK-gamma/NEWO. Heterodimers form the active complex The tripartie complex can also bind to MEKK1, MAP3K14/NIK, IKAP and IKB-alpha-P65-P50
                                                                                                                                                                                                                                                                                                                                    J. Physiol. 278:C451-C462 (2000).

FUNCTION: Phosphorylates inhibitors of NF-kappa-B thus leading the dissociation of the inhibitor/NF-kappa-B complex and ultimately the degradation of the inhibitor. Also phosphorylate
                                                                                                      European Bioinformatics Institute.
                                                                                                                                                                                                                and CREBBP (By similarity).
SUBCELLULAR LOCATION: Cytoplasmic.
                                                                                                                                                                                                                                         complex. Phosphorylated IKB-alpha is complex. Found in a complex composed
                                                                                                                                                              IKAPPAB KINASE SUBFAMILY.
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                                                                                                                                                                                                                                                                                                                          NCOA3
                                                                                                                    SWISS-PROT entry is copyright. It is produ
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             AF115282; AAF21978.1; Q63450; 1A06.
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Pred. No.
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RESULT 8
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    PRESENTATION OF THE PRESEN
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Best Local
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DOMAIN
15
DOMAIN
458
DOMAIN
737
NP BIND
21
BINDING
44
ACT_SITE
145
MOD_RES
23
MOD_RES
177
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01-AUG-1990
15-SEP-2003
                                   Yamamoto Y., Alba H., Haba T., Hayashi K., Inada T., Isono K., Itoh T., Kimura S., Kitagawa M., Makino K., Miki T., Mitsuhashi N., Mizobuchi K., Mori H., Nakade S., Nakamura Y., Nashimoto H., Oshima T., Oyama S., Saito N., Sampei G., Satoh Y., Sivasundaram S. Tagami H., Takahashi H., Takeda J., Takemoto K., Uehara K., Wada C. Yamagata S., Horiuchi T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=90264334; PubMed=2188958;
Sirko A., Hryniewicz M.M., Hulanich
"Sulfate and thiosulfate transport
nucleotide sequence and expression
J. Bacteriol. 172:3351-3357(1990).
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MOD_RES
MOD_RES
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PRINTS; PR00109; TYRKINASE.
ProDom; PD000001; Prot kinase;
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PROSITE; PS00107; PROTEIN_KINASE_DOM; 1
PROSITE; PS50011; PROTEIN_KINASE_ST; 1.
PROSITE; PS00108; PROTEIN_KINASE_ST; 1.
                                                                                                                                                                                                                                                                                                  Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burlar
Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.
Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.C
                                                                                                                                                            MEDLINE=97349980;
                                                                                                                                                                                                                                              Science
                                                                                                                                                                                                                                                                                    Mau B.,
                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=97426617; PubMed=9278503;
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                       'Construction
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nce 277:1453-1474(1997).
  genome
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corresponding
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15, Last sequence up
42, Last annotation
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ATP (BY SIMILAI
BY SIMILARITY.
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HOSPHORYLATION (BY SIMILARITY)
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BAFFE46A7DF91F9C CRC64;
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                         Escherichia coli
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cluster.";
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RESULT 9
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Best Local &
Matches 5
J.
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TRANSMEM
SEQUENCE
                                                                                                                                   01-NOV-1997 (Rel. 22, Last sequence update)
Protein-tyrosine phosphatase 1 (EC 3.1.3.48)
PTP1 OR YDL230W.
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TRANSMEM
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             SEQUENCE FROM N.A.

MEDILINE=91302312; PubMed=1649172;
Guan K., Deschenes R.J., Qiu H., Dixon J.E.;

"Cloning and expression of a yeast protein t
J. Biol. Chem. 266:12964-12970(1991).
                                                                                                   Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungî; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000515; BPD transp.
InterPro; IPR005667; Sulph transpt
Pfam; PF00528; BPD transp; 1.
TIGRPAMS; TIGR00969; 3a0106802; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AE000330; AAC75477.1; -.
EMBL; D90871; BAA16298.1; -.
EMBL; D90872; BAA16307.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the European Bioinformatics Institute. The use by non-profit institutions as long a modified and this statement is not removed.
                                                                                                                                                                01-MAY-1992 (Rel. 22,
01-MAY-1992 (Rel. 22,
01-NOV-1997 (Rel. 35,
                                                                                                                                                                                                                                   YEAST
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                        PTP1_YEAST
P25044;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; M32101; AAA23637.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00402; BPD_TRANSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EcoGene; EG10197; cysU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIR; A35402; QRECST.
                                                                                      NCBI_TaxID=4932;
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FUNCTION: Part of the ABC transporter complex cysAWTP (TC FUNCTION: Dart of the ABC transporter complex cysAWTP (TC 3.A.1.6.1) involved in sulfate/thiosulfate import. Probably responsible for the translocation of the substrate across the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Potential).
SIMILARITY: BELONGS TO THE BINDING-PROTEIN-DEPENDENT TRANSPORT
SYSTEM PERMEASE FAMILY. CYSTW SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CysA), two transmembrane proteins (CysT and CysT binding protein (CysP) (Probable).
SUBCELLULAR LOCATION: Integral membrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBUNIT: The complex is composed of two ATP-binding functions from transmembrane proteins (cysT and cysW) a
                                                                                                                                                                                                                                                                                   44
                                                                                                                                                                                                                                                                                                                                    Similarity
5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                 MAQYWEV
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164
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136
1136
1185
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277 AA;
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4:91-113(1997).
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71.4%;
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POTENTIAL.
POTENTIAL.
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; Membrane; Inner membrane; Transmembrane;
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1392821B0DE24459 CRC64;
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                          tyrosine phosphatase.
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RESULT 10
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SMART; SM00194; PTPC; 1.
PROSITE; BS00383; TYR PHOSPHATASE 1; 1.
PROSITE; PS50056; TYR_PHOSPHATASE_2; 1.
PROSITE; PS50055; TYR_PHOSPHATASE_PTP; 1.
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SGD; S0002389; PTP1.

GO; GO:0006470; P:protein amino acid dephosphorylation; IDA
InterPro; IPR000387; TYR_phosphatase.
InterPro; IPR000242; Tyr_PP.
Pfam; PP00102; Y_phosphatase; 1.
PRINTS; PR00700; PRTYPHPHTASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mau B., Shao r.;
"The complete genome sequence Science 277:1453-1474(1997).
                                                                 Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V., Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J., Mau B., Shao Y.;
                                                                                                                                                                                                                  Hypothetical protein ycds
YCDS OR B1024 OR Z1526 OR
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ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
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         SEQUENCE FROM STRAIN=K12;
                                                                                                                                                                                             Escherichia coli, and Escherichia coli 0157:H7.
                                                                                                                                                                                                                                           01-NOV-1997
16-OCT-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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                                                                                                             STRAIN=K12 / MG1655;
MEDLINE=97426617; PubMed=9278503;
                                                                                                                                                                                                                                                                              P75907;
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HSSP; P29350; 1GWZ.
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between the Swiss Institute of Bio:
MEDLINE=97061202; PubMed=8905232;
                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                         Enterobacteriaceae; Escherichia
                                                                                                                                                                                  Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                   01-NOV-1997
                                                                                                                                                                                                                                                                                          YCDS
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335 AA;
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(Rel. 35, Last sequence up
(Rel. 40, Last annotation)
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ECS1270.
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RESULT 11
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Mori H., ...
       Q88894;
15-DEC-1998
15-DEC-1998
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Hypothetical protein; Outer SIGNAL
                                                                                                                                                                                                                                CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=21156231; PubMed=11258796; Kurokawa K., Ishii K., Yokoyama K. Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoyama K. Hayashi T., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Tobe T., Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunaga T., Kuhara S., Shiba T., Hattori M., Shinagawa H.; "Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genomic comparison with a laboratory strain K-12."; DNA Res. 8:11-22(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=0157:H7 / EDL933 / ATCC 700927;

MEDLINB=21074935; PubMed=11206551;

Perna N.T., Plunkett G. III, Burland V., Mau B., Glasner J.D.,

Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A.,

Posfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller L.,

Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K.,

Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C.,

Welch R.A., Blattner F.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "A 718-kb DNA sequence of the Escherichia coli K-12 genome corresponding to the 12.7-28.0 min region on the linkage map."; DNA Res. 3:137-155(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=0157:H7 / F
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EMBL; AE005302; AAG55642.1;
EMBL; AP002554; BAB34693.1;
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Nature 409:529-533(2001).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             European Bioinformatics Institute.
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                                                  TRSV
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F90787; F90787.
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                                                                                                                                                                         Similarity 5; Conser
                                                                                                                                                                                                                                                                                                               EG13865;
                                                                                                                    WGQYW 318
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BAA35809.1; -.
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44;
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Tobe T.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       icosahedral capsids in the picornavirus superfamily."; Structure 6:157-171(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Coat protein precursor (Capsid protein)
Tobacco ringspot virus (TobRV) (TRSV).
Viruses, ssRNA positive-strand viruses,
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InterPro; IPR005305; Nepo_coat_N.
InterPro; IPR005306; Nepo_coat_N.
Pfam; PF03391; Nepo_coat_I.
Pfam; PF03688; Nepo_coat_C; 1.
Pfam; PF03689; Nepo_coat_N; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=95274284; PubMed=7754671;
Buckley B., Silva S., Singh S.;
Virus Res. 35:111-111(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A., AND PARTIAL SEQUENCE. MEDLINE-94152161; PubMed-8109164; Buckley B., Silva S., Singh S.; Suckley B., Silva S., Singh S.; "Nucleotide sequence and in vitro expression gene of tobacco ringspot virus."; Virus Res. 30:335-349(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PDB; 1A6C; 15-JUL-98
InterPro; IPR005054;
InterPro; IPR005305;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 X-RAY CRYSTALLOGRAPHY (3.5 ANGSTROMS)
MEDLINE=98179933; PubMed=9519407;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=12282;
          3D-structure
          COAT PROTEIN
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STIRE BROWN BROWN

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GAP1 YEAST
ID GAP1 YEAST
ID GAP1 YEAST
ID GAP1 YEAST
AC P19145;
DT 01-JUN-1
DT 15-SEP-2
DF General
GN GAP1 OR
OC Eukaryot
OC Saccharc
OC Saccharc
OX NCBI_Tax
RN [1]
RP SEQUENCE
RX MEDLINE-
RA JAUNIAUM
RT "GAP1, t
TCETEVIES
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                                    Jauniaux J.-C., Grenson M.; "GAP1, the general amino ac cerevisiae. Nucleotide sequ
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                                                    SEQUENCE FROM N.A.
MEDLINE=90306009; PubMed=2194797;
                                                                     NCBI_TaxID=4932;
                                                                                Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
                                                                                             General amino-acid permease GAP1. GAP1 OR YKR039W.
                                                                                                         01-NOV-1990 (Rel.
01-JUN-1994 (Rel.
15-SEP-2003 (Rel.
                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                     TURN
                         bakers yeast
repression.";
                                                                            Saccharomycetales; Saccharomycetaceae; Saccharomyces.
Urrestarazu L.A.,
       SEQUENCE FROM N.A
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5; Conserv
                   Biochem.
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                              amino
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A
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                  190:39-44 (1990)
                                                                                                       16, Created)
29, Last sequence update)
42, Last annotation updat
 Jauniaux J.-C.;
                              acid
                                                                                                                                                                                                                                     57168 MW;
                                                                                                                                                                                            67.2%;
83.3%;
                              sequence, p
d permeases,
                            acid permease gene of a equence, protein similar permeases, and nitrogen
                                                                                                                                                                                            Score 39; DB
Pred. No. 41;
                                                                                                                                 PRT;
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                                                                                                                                 602 AA
                                                                                                         update)
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                             ene of Saccharomyces similarity with the itrogen catabolite
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PIR;
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RESULT 13
POL SIVA3
ID POL SIVA3
AC P12501;
DT 01-OCT-1989
DT 01-OCT-1989
DT 28-FEB-2003
DE POL polyprote
DE Reverse trans
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Best Local :
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SEQUENCE
01-OCT-1989 (Rel. 12, Created)
01-OCT-1989 (Rel. 12, Last sequence update)
28-FEB-203 (Rel. 41, Last annotation update)
POL polyprotein [Contains: Protease (Retropepsin)
Reverse transcriptase (EC 2.7.7.49); Ribonuclease
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -i- FUNCTION: Permease for various amino acids as we can also transport L-cysteine.
-i- SUBCELIULAR LOCATION: Integral membrane protein.
-i- SIMILARITY: Belongs to the amino acid permease f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00324; aa permeases;
TIGRFAMs; TIGR00913; 2A0310;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; X52633; CAA36858.1;
EMBL; Z28264; CAA82113.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license agreement (S or send an email to license@isb-sib.ch).
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PROSITE; PS00218; AMINO
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InterPro; IPR002293; AA/rel_permease1.
InterPro; IPR004840; AAc_permease.
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GO; GO:0006865;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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5; Conservative
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                                                                                                     STANDARD;
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SOURCE (IN REF. 1).
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                                                                                                                                                                                                                                                                                   Length 602;
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   (EC 3.4.23.-);
H (EC 3.1.26.4)]
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RESULT 14
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P41032;
P1-FEB-1995
28-FEB-2003
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                                                                                                                                                                                           01-FEB-1995 (Rel. 31, Created)
28-FEB-2003 (Rel. 41, Last sequence up
15-SEP-2003 (Rel. 42, Last annotation
Sulfate transport system permease prot
CYSU OR CYST OR STM2443.
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                  Courtney L., Porwollik S., Al
Leonard S., Nguyen C., Scott
Ryan B., Sun H., Florea L., M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This
                  McClelland M., Sanderson K.E., Spieth J., Clifton S.W., Latreille P., Courtney L., Porwollik S., Ali J., Dante M., Du F., Hou S., Layman D., Leonard S., Nguyen C., Scott K., Holmes A., Grewal N., Mulvaney E., Ryan E., Sun H., Florea L., Miller W., Stoneking T., Nhan M.,
                                                                            STRAIN=LT2 / SGSC1412 / ATCC 70072
MEDLINE=21534948; PubMed=11677609;
                                                                                                          SEQUENCE
                                                                                                                                                    Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Salmonella.
                                                                                                                                                                                 Salmonella typhimurium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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PROSITE; PS00141; ASP PROTEASE; PARTIAL.
AIDS; Polyprotein; Hydrolase; Aspartyl p
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Daniel M.D., Li Y., Naidu Y.M., Durda P.J., Schmidt D.
Troup C.D., Silva D.P., Mackey J.J., Kestler H.W., Seb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Simian immunodeficiency virus (AGM385 isolate) (SIV-AGM).
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InterPro; IPR002156; RNaseH.
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CATALYTIC ACTIVITY: N deoxynucleoside triphosphate = N diphosphate
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Transferase; RNA-directed DNA polymerase
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         Wilson R.K.;
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                                                                                                                                                                                                                                                                                    STANDARD;
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71.4%;
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Pred. No.
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BELONGS TO
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TO PEPTIDASE FAMILY A2; ALSO
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StyGene; IPR000515; BPD transp.
InterPro; IPR005667; Sulph_transpt2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed.
Eukaryota; Metazoa; Arthropoda; Hexapoda; Ins
Neoptera; Endopterygota; Diptera; Brachycera;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                          DROME
                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00528; BPD transp; 1.
TIGRPAMS; TIGR0965; 3a0106802; 1.
PROSITE; PS00402; BPD TRANSP INN MEMBR;
Transport; Sulfate transport; Membrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "The cysp promoter of Salmonella typhimurium: characterization of binding sites for CysB protein, studies of in vivo transcription initiation, and demonstration of the anti-inducer effects of thiosulfate.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=91358382;
                                   Drosophila melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AE008810; AAL21337.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBUNIT: The complex is composed of two ATP-binding proteins (cysh), two transmembrane proteins (cysT and cysW) and a solute binding protein (cysP) (Probable).

SUBCELLULAR LOCATION: Integral membrane protein. Inner membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION: Part of the ABC transporter complex cysAWTP (TC 3.A.1.6.1) involved in sulfate/thiosulfate import. Probab responsible for the translocation of the substrate across
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SUBUNIT: The complex is c
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(Rel. 40, Last annotation update)
ecursor (EC 3.1.1.-) (DmLip3).
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RA ADIII J.F., Agbayani A., An H.-J., Andrews-Prannkoch C., Baldwin D., RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M., RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S., RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., Borskis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I., RA Gherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P., RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P., RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P., RA Cherry J.M., Cawley S., Dahlke C., Mays A.D., Dew I., Dietz S.M., RA Cherry J.M., Cawley S., Downes M., Dugan-Rocha S., Duhkov B.C., Dunn P., RA Collek R., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., RA Fosler C., Gabrielian A.B., Garg N.S., Gelbart W.M., Glasser K., RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J., RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J., RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., Liang Y., Lin X., Lai J., Liz, J., Liang Y., Lin X., Lai J., Liz, J., Liang Y., Lin X., RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D. J., Moshrefi A., RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., Webherson D. J., Moshrefi A., RA Rainert K., Remington K., Samders R.D.C., Scheeler F., Shen H., RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T., RA Rainert K., Remington K., Samders R.D.C., Scheeler F., Shen H., RA Rainert K., Remington K., Samders R.D.C., Scheeler F., Shen H., RA Rainert K., Remington K., Sungsti M.P., Smith T., RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J., RA Rainert K., Remington K., Sungsti M.P., Smith T., Rang S., Yao Q.A., Steng J., Yang S., Yao Q.A., Pitters B.W., Zhong W., Zhou X., Zhu X., Smith H.O., Ra Yeng J., Yen R., F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L., Fitter S., Spradling M., Scholer J., Smith H.O., Ra Yeng J., Shan R., Shan R., Fitter J., Shan M.
the
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                                                                                                                                                                                                                                                                               EMBL; Y14367; CAA74737.1;
EMBL; AE003699; AAF54935.
                                                                                                                                                                                                                                                                                                                                                                                                                                            modified and this statement is not entities requires a license agreeme
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SIMILARITY: PARTIAL WITH OTHER LIPASES (PANCREATIC, HEPATIC, LINGUAL, LIPOPROTEIN, BACTERIAL, ETC.). AI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                         an email to license@isb-sib.ch).
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ker S.E., Holt R.A.,
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Lin X., Kaul S., Rounsley S.D., Shea T.P., Benito M.-I., Town C Fujii C.Y., Mason T.M., Bowman C.L., Barnstead M.E., Feldblyum Buell C.R., Ketchum K.A., Lee J.J., Ronning C.M., Koo H.L., Moffat K.S., Cronin L.A., Shen M., Pai G., Van Aken S., Umayam Moffat K.S., Cronin L.A., Shen M., Pai G., Van Aken S., Umayam Tallon L.J., Gill J.E., Adams M.D., Carrera A.J., Creasy T.H., Goodman H.M., Somerville C.R., Copenhaver G.P., Preuss D., Goodman H.M., Somerville C.R., Copenhaver G.P., Fraser C.M., White O., Eisen J.A., Salzberg S.L., Fraser C.M.,
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                                                                 This SWISS-PROT entry is copyright. between the Swiss Institute of Bioi
                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=94307379; PubMed=8033999; Frommer W.B., Hummel S., Rentsch D.; "Cloning of an Arabidopsis histidine nitrate and peptide transporters."; FEBS Lett. 347:185-189(1994).
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01-NOV-1995 (Rel. 32, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Peptide transporter PTR2-B (Histidine transporting
PTR2-B OR NTR1 OR ATZG02040 OR F14H20.11.
                                                                                                                                                                                                                                                                                                                                STRAIN-cv.
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                                                                                                                                                 Nature 402:761-768(1999).
                                                                                                                                                                            thaliana.",
                                                                                                                                                                                                        Venter J.C.;
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Hydrolase; Lipid degradation; Signal; Glycoprotein.
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SIMILARITY:
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                                                                                                        Integral membrane protein.
O THE PTR2 FAMILY OF TRANSPORTERS.
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Pred. No.
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                                                                                                                                                 AFFINITY, LOW
                                                   There are no
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                                      as its content
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                                                                                                                                                                                         plant Arabidopsis
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(BY
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                                                                                                                                                  CAPACITY
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                                                   restrictions
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                                                                 EMBL outstation
                           for
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RESULT 17
YEJH_ECOLI
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YEJH ECOLI
YEJH ECOLI
P339T9; p36926; p36927; p76449;
01-FEB-1994 (Rel. 28, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 41, Last annotation update)
01-NFEB-2003 (Rel. 41, Last annotation update)
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EMBL; X77503; CAA54634.1; -.
EMBL; AC006532; AAD20096.1; -.
                                                                                               "The complete genome sequence of Escherichia coli K-12."; Science 277:1453-1474(1997).
-i- SIMILARITY: SOME SIMILARITY TO A PHAGE PROTEIN AND RE
                                                                                                                                         Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V., Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.,
                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN-K12 / MG1655;
MEDLINE-97426617; PubMed-9278503;
                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=K12 / BHB2600;
Richterich P., Lakey
                                                                                                                                                                                                                                                                                               Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Escherichia.
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PROSITE; PS01022; PTI
PROSITE; PS01023; PTI
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PIR; S46236; S46236.
                                                                                                                                 Mau B.,
                                                                                                                                                                                                                                 Church G
                                                                                                                                                                                                                                                                                                                     Escherichia coli.
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                                                               MODIFICATION SYSTEMS.
CAUTION: REF.1 SEQUENCE DIFFERS
THAT PRODUCE THREE SEPARATE ORFS
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C58F8194776E2D97
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                                                                   ORFS.
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                                                                                                 PHAGE PROTEIN AND RESTRICTION
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RESULT 18
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Pfam; PF00271; helicase C; 1.
SMART; SM00487; DEXDc; 1.
SMART; SM00490; HELICC; 1.
SMOO490; HELICC; 1.
SEQUENCE 586 AA; 66413 MW; 2
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Thermomonospora fusca.
Bacteria; Actinobacteridae; Actinomycetales;
Bacteria; Actinobacteridae; Thermobifida.
fusca.";
Nat. Struct. Biol. 4:810-818(1997)
-!- CATALYTIC ACTIVITY: Endohydrol
                                                                                                                                                                                                                                                                                                                                                         MEDLINE=91258320; PubMed=1904434;
Lao G., Ghangas G.S., Jung B.D., Wilson D.B.;
"DNA sequences of three beta-1,4-endoglucanase genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Streptosporangineae;
NCBI_TaxID=2021;
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                                                                          Sakon J., Irwin D., Wilson D.B., Karplus P.A., "Structure and mechanism of endo/exocellulase |
                                                                                                                        MEDLINE=97475222; PubMed=9334746;
                                                                                                                                                                                              "Cellulases of Thermomonospora fusca."; Meth. Enzymol. 160:314-323(1988).
                                                                                                                                                                                                                                          SEQUENCE OF 47-67.
Wilson D.B.;
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                                                                                                                                                 X-RAY CRYSTALLOGRAPHY (1.9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wilson D.B.;
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InterPro; IPR001650;
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                                                                                                                                                                                                                                                                                                               Bacteriol. 173:3397-3407(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E.D., Lao G., Irwin D., Barr B.K., Benjamin A., Wilson D.B.; sequences and expression in Streptomyces lividans of an lucanase gene and an endoglucanase gene from Thermomonospora
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                                                                                                                                                                                                                                                                                                                                          fusca."
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Pred. No. 66;
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2D173250F83333DF CRC64;
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    of 1,4-beta-D-glucosidic
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Pfam; PF00553; CBM_2; 1.
Pfam; PF00942; CBM_3; 1.
Pfam; PF00041; fn3; 1.
Pfam; PF00759; Glyco hydro_9; 1
SMART; SM00637; CBD_II; 1.
SMART; SM00060; FN3; 1.
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PROSITE; PS00592; GLYCOSYL HYDROL F9 1; 1.

PROSITE; PS00698; GLYCOSYL HYDROL F9 2; 1.

Cellulose degradation; Hydrolase; Glycosidase;
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BL; M73322; AAA27397.1; ALT_SEQ.
B; 1JS4; 17-SEP-97.
B; 1F74; 04-SEP-97.
B; 3TF4; 04-SEP-97.
B; 4F74; 04-SEP-97.
terPro; IPR001919; Bac_celose-bind.terPro; IPR001919; Bac_celose-bind.terPro; IPR001956; CBD 3.
terPro; IPR003961; FN_III.
terPro; IPR001701; Glyco_hydro_9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linkages in cellulose, lichenin and cereal beta-D-glucans.
PATHWAY: Cellulose degradation.
SIMILARITY: BELONGS TO CELLULASE FAMILY E (FAMILY 9 OF GLYCOSYL
HYDROLASES).
SIMILARITY: Contains 1 fibronectin type III domain.
SIMILARITY: Contains 1 fungal-type cellulose-binding (CBD) doma:
         ENDOGLUCANASE E-4.
FIBROMECTIN TYPE-III.
CELLULOSE-BINDING.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      noved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
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RESULT 19
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ID YE68_METJA
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       STANDARD;
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MEDLINE-96337999; PubMed-8688087;

Bult C.J., White O., Olsen G.J., Zhou L., Fleischmann R.D.,

Sutton G.G., Blake J.A., FitzGerald L.M., Clayton R.A., Gocayne J.D.,

Kerlavage A.R., Dougherty B.A., Tomb J.-F., Adams M.D., Reich C.I.,

Overbeek R., Kirkness E.F., Weinstock K.G., Merrick J.M., Glodek A.,

Scott J.L., Geoghagen N.S.M., Weidman J.F., Fuhrmann J.L., Nguyen D.,

Utterback T.R., Kelley J.M., Peterson, D.J., Sadow P.W., Hanna M.C.,

Cotton M.D., Roberts K.M., Hurst M.A., Kaine B.P., Borodovsky M.,

Klenk H.-P., Fraser C.M., Smith H.O., Woese C.R., Venter J.C.;

"Complete genome sequence of the methanogenic archaeon, Methanococcus
                CENB.
                                 Endoglucanase (Cellulase B).
                                                                            28-FEB-2003
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-!- SUBCELLULAR LOCATION: Integ-
-!- SIMILARITY: Contains 5 PKD
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Archaea; Euryarchaeota; Methanococci; Methanococcales;
Methanocaldococcaceae; Methanocaldococcus.
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RA Meinke A., Gilkes N.R., Kilburn D.G., Miller R.C. Jr., Warren R.A.J.;

RA Meinke A., Gilkes N.R., Kilburn D.G.,

RT functions and relatedness to domains in other polypeptides.";

RL J. Bacteriol. 173:7126-7135(1991).

CC -!- FUNCTION: THE BIOLOGICAL CONVERSION OF CELLULOSE TO GLUCOSE

CC GENERALLY REQUIRES THREE TYPES OF HYDROLYTIC ENZYMES:

CC (1) ENDOGLUCANASSES WHICH THE DISSACCHARIDE CELLOBIOSE

CC (2) EXOCELLOBIOHYDROLASES THAT CUT THE DISSACCHARIDE CELLOBIOSE

CC (2) EXOCELLOBIOHYDROLASES THAT CUT THE DISSACCHARIDE CELLOBIOSE

CC (3) BETA-1,4-GLUCOSIDASES WHICH HYDROLYZE THE CELLOBIOSE AND OTHER

CC (3) BETA-1,4-GLUCOSIDASES WHICH HYDROLYZE THE CELLOBIOSE AND OTHER

CC (1) ENDOGLUCAN SESS WHICH HYDROLYZE THE CELLOBIOSE AND OTHER

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CC (4) BETA-1,4-GLUCOSIDASES WHICH HYDROLYZES THE CELLOBIOSE AND OTHER

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CC (4) BETA-1,4-GLUCOSIDASE WHICH HYDROLYZES THE CELLOBIOSE AND OTHER

CC (5) BETA-1,4-GLUCOSIDASE WHICH HYDROLYZES THE CELLOBIOSE AND OTHER

CC (4) BETA-1,4-GLUCOSIDASE WHICH HYDROLYZES THE CELLOBIOSE

AND OTHER

CC (5) BETA-1,4-GLUCOSIDASES THAT CUT THE DISSACCHARIDE AND OTHER

CC (4) ENCOCELLAR THE BELONGE THE CELLOBIOSE THE CATALYTIC DOMAIN.

CC (1) SIMILARITY: CONTAIN 3 EECOND CBD IN THE CATALYTIC DOMAIN.

CC (1) SIMILARITY: CONTAIN 3 EECOND CBD IN THE CATALYTIC DOMAIN.
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PROSITE; PS00698; GLYCOSYL HYDROL F9 2; 1.
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Pfam; PF00759; Glyco_hydro_9;
SMART; SM00637; CBD_II; 1.
SMART; SM00060; FN3; 3.
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Pfam; PF00942; CBM_3; 1.
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InterPro; IPR003961;
InterPro; IPR001701;
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J. Bacteriol. 173:308-314(1991).
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Warren R.A.J.;
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MEDLINE=91100298;
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Micrococcineae; Cellulomonadaceae; Cellulomonas.
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Best Local :
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SIVAG
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or send a
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DISULFID
SEQUENCE
PROSITE; PS00141; ASP_PROTEASE; 1.
PROSITE; PS50175; ASP_PROT_RETROV; 1.
AIDS; Polyprotein; Hydrolase; Aspartyl protease; Er Nuclease; Transferase; RNA-directed DNA polymerase. CHAIN 1 195
ACT_SITE 118 118 BY SIMILARITY.
                                                                                                                                                      Pfam; PF00552; integrase; 1.
Pfam; PF02022; Integrase Zn;
Pfam; PF00075; rnaseH; 1.
Pfam; PF00665; rve; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Baier M., Garber C., Mueller C., "Complete nucleotide sequence of African green monkeys: a novel ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POL_SIV.
P27980;
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                                                                                                                                                                                                                                                                       InterPro; IPR001995; Aspprotease_rtrv.
InterPro; IPR001969; Aspprotease_site.
InterPro; IPR00137; Integrase_C.
InterPro; IPR003308; Integrase_Zn.
InterPro; IPR002156; RNaseH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Simian immunodeficiency virus Viruses; Retroid viruses; Retr
                                                                                                                                                                                                                                       InterPro;
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                                                                                                                                                                                                                                     InterPro; IPR001584; Rve.
InterPro; IPR000477; RVTse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ANG-1992 (Rel. 23, Last a-FEB-2003 (Rel. 41, Last a L polyprotein [Contains: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                 send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    European Bioinformatics Institute. The by non-profit institutions as long ified and this statement is not removed.
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CATALYTIC ACTIVITY: Endonucleolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MISCELLANEOUS: THIS IS AN AFRICAN
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CATALYTIC ACTIVITY: N deoxynucleoside triphosphate =
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                                                                                                                                    PF00077; rvp; 1.
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83.3%;
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uins: Protease (Retropepsin)
(EC 2.7.7.49); Ribonuclease
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uence of a simian immunode
novel type of intragroup
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Retroviridae; Lenti
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YB
YB
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Pred.
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FO PEPTIDASE FAMILY A2; ALSO
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1.2e+02;
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immunodeficiency virus
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                                                            Endonuclease;
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RESULT 22
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Best Local
                                                                                                                                         InterPro; IPR001037; I
InterPro; IPR003308; I
InterPro; IPR002156; I
InterPro; IPR001584; I
InterPro; IPR000477; I
           Nuclease;
ACT_SITE
                                                                                           Pfam;
Pfam;
                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9279/3, 2279/3, 2017-1992 (Rel. 23, Createu, 01-AUG-1992 (Rel. 23, Last sequence update) 01-AUG-1992 (Rel. 21, Last annotation update) 28-FEB-2003 (Rel. 41, Last annotation update) POL polyprotein [Contains: Protease (Retropepsin) POL polyprotein (CONTAINS: Protease (Retropepsin) POL polyprotein (EC 2.7.7.49); Ribonuclease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                             PROSITE; PS00141; ASP_PROTEASE; 1.

PROSITE; PS50175; ASP_PROT_RETROV; 1.

PROSITE; Polyprotein; Hydrolase; Aspartyl protease;
                                                                                 Pfam;
                                                                                                                    Pfam;
                                                                                                                              Pfam;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Simian immunodeficiency viruses from African unusual genetic diversity.";
                                                                                                                                                                                                                                      EMBL; M29975; AAA91906.1;
HSSP; P03366; 1HRH.
                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                       entities
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Johnson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=90156504; PubMed=2304139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Viruses; Retroid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Simian immunodeficiency virus (AGM155 isolate)
                                                                                                                                                                                                     InterPro; IPR001969;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=11727;
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CATALYTIC ACTIVITY: Endo
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CATALYTIC ACTIVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIVAL
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                                                                            PF000665; rve; 1. PF00077; rvp; 1.
                                                                                                       PF000552; integrase;
PF02022; Integrase;
PF00075; rnaseH; 1.
                                                                       PF00078; rvt;
                                                                                                                                                                                                                                                                                                                                                                                                                                              (DNA)
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d R.A., Hirsch V.M.;
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                                                                                                                                                                                                                                                                                     requires a license agreement
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           Transferase; RNA-directed DNA polymerase.
113 BY SIMILARITY.
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 118871 MW;
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FAMILY.
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Pred. No. 1
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 A38DDDA39F268EE5 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        diphosphate
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Length 1047;

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RESULT
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                                                                                         Pfam; PF00552; integrase; 1.

Pfam; PF02022; Integrase Zn; 1.

Pfam; PF0075; rnaseH; 1.

Pfam; PF00075; rve; 1.

Pfam; PF00077; rvp; 1.

Pfam; PF00078; rvt; 1.

Pfam; PF00675; rve; 1.

Pfam; PF00675; rve; 1.

Pfam; PF0077; rvp; 1.

Pfam; PF0077; rvp; 1.

Pfam; PF0077; rvp; 1.

Pfam; PF0075; rve; 1.

Pfam; PF0077; rvp; 1.

Pfam; PF007
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001995; Aspprotease_rtrv.
InterPro; IPR001969; Aspprotease_site.
InterPro; IPR001037; Integrase_C.
InterPro; IPR003308; Integrase_Zn.
InterPro; IPR002156; RNaseH.
InterPro; IPR001584; Rve.
InterPro; IPR0001784; RVe.
InterPro; IPR000177; RVTse.
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SIVAT
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                                           CHAIN
ACT_SITE
                SEQÜENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; X07805; CAA30658.
HSSP; P26315; 2MVP.
HIV; X07805; POL$AGMTY.
MEROPS; A02.003; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Miki K., Kitamura T., Hayami M.; "Sequence of simian immunodeficiency virus a new member of the HIV/SIV group.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE=88232906; PubMed=3374586;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=11731;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Simian immunodeficiency virus (TYO-1 isolate) (SIV-AGM) Viruses; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Reverse
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10V-1988 (Rel. 09, Last sequence update)
10P-1988 (Rel. 41, Last annotation update)
10P-1988 (Rel. 41, Last annotation update)
10P-1988 (Rel. 09, Last sequence update)
10P-1988 (Rel. 09, Last sequence update)
10P-1988 (Rel. 09, Creace, Last sequence update)
10P-1988 (Rel. 09, Last sequence update)
10P-1988 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           phosphomonoester.
CATALYTIC ACTIVITY: N deoxynucleoside triphosphate = N diphosphate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: THE PROTEASE BELONGS TO PEPTIDASE FAMILY A2; ALSO KNOWN AS THE RETROPEPSIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATALYTIC ACTIVITY: Endonucleolytic cleavage to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MISCELLANEOUS: THIS IS AN AFRICAN
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                <u>Α</u>
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134
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             120612 MW;
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             13DDD4104CB432A4 CRC64;
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No. 1.2e+02;
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RESULT 25
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Best Local 9
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Best Local
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MOUSE
       p30962;
01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Heme exporter protein C (Cytochrome c-type biogenesis protein cycZ).
CYCZ OR CCMC OR BLR0469.
                                                                                   BRAJA
CCMC_I
                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sorsend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                                      NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mitochondria.";
J. Biol. Chem. 276:21724-21736(2001).
-!- SUBCELLULAR LOCATION: Mitochondrial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Structural compensation for the deficit of rRNA with mammalian mitochondrial ribosome. Systematic analysis components of the large ribosomal subunit from mammali
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Suzuki T., To Watanabe K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RM09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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28-FEB-2003
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28-FEB-2003
Bradyrhizobium
                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                             Ribosomal protein; Mitochondrion; Transit peptide
                                                                                                                                                                                                                                                                                                         InterPro; IPR000244; Ribosomal_L9.
Pfam; PF01281; Ribosomal_L9_N; 1.
                                                                                                                                                                                                                                                                                                                                             EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE=21293042; PubMed=11279069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
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                                                                                 BRAJA
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                                                                                                                                                                  3 WGQYW 7
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WGEYW 208
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                                                                                                                                                                                                                                             256 AA;
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(Rel. 41,
(Rel. 41,
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mitochondrial precursor (L9mt) (Fragment).
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Pred. No.
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Pred. No. 1.2e+02;
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60S RIBOSOMAL PROTEIN L9.
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Inner membrane; Complete
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InterPro; CytC_asm; I.
PF11578; CytC_asm; I.
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-!- SIMILARITY: BELONGS TO THE CCMC/CYCZ/HELC FAMILY.
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-i- SUBCELLULAR LOCATION: Integral membrane protein. Inner membrane
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Sasamoto S., Watanabe A., Idesawa K., Iriguchi M., Kawashima K.,
Kohara M., Matsumoto M., Shimpo S., Tsuruoka H., Wada T., Yamada M.,
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Bradyrhizobiaceae; Bradyrhizobium.
NCBI_TaxID=375;
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263 AA;
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5: sp_invertebrate
6: sp_manmal:*
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9: sp_phage:*
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58
1 KVWGQYWQV 9
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

16	15	14	13	12	11	10	9	80	7	თ	ຫ	4.	س	N	۳	Result No.
40	40	40	40	40	40	40	41	41	41	42	42	43	49	49	50	Score
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Q8PUV6	Q8DKT3	Q8ZJG2	Q8FFB2	Q8ZCH5	Q8XBJ6	Q9DWY4	Q95KV0	Q9DWY8	Q8QR33	Q9KPY3	Q8RD90	Q45818	Q8CVV9	Q8XE36	Q9CZB2	ij
Q8puv6 methanosarc	Q8dkt3 synechococc	Q8zjg2 yersinia pe	Q8ffb2 escherichia	Q8zch5 yersinia pe	Q8xbj6 escherichia	Q9dwy4 human papil	Q95kv0 bos taurus	Q9dwy8 human papil	Q8qr33 human papil	Q9kpy3 vibrio chol	Q8rd90 thermoanaer	Q45818 chloroflexu	Q8cvv9 escherichia	Q8xe36 escherichia	Q9czb2 mus musculu	Description

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	11 Q91YV6		67.2	39	5
Q8ck63 streptomyce	16 Q8CK63		67.2	39	34
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083324 treponema	16 083324		67.2	9	32
Q9zp33 lycopersico		267	67.2	39	31
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O18533 schistosoma	5 018533			40	8
P74474 synechocyst	16 P74474	400	69.0	40	۲7

ALIGNMENTS

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Nordone P., Rin Sasaki H., Sato Suzuki H., Toyo Wynshaw-Boris A Hayashizaki Y., "Functional ann Nature 409.685- EMBL; AKO12808; MGD; MGI:98301;	Schriml L.M., Sakai K., Oki. Blake J., Bof Brownstein M., Gustincich S. Lyons P., Mar	SEQUENCE FROI SEQUENCE FROI STRAIN=C57BL, MEDLINE=2108 Kawai J., Sh Arakawa T., I Aizawa K., II Aizawa K., II Saito T., Ok Kadota K., M Fleischmann I	9CZB2 9CZB2; 1-JUN-2001 1-JUN-2001 1-OCT-2002 /A. I OR SI. Us musculus ukaryota; Mammalia; Eu
Nordone P., Ring B., Ringwald M., R Sasaki H., Sato K., Schoenbach C., Suzuki H., Toyo-oka K., Wang K.H., Wynshaw-Boris A., Yoshida K., Haseg "Hayashizaki Y.; "Functional annotation of a full-le Nature 409:685-690(2001). EMBL; AK012808; BAB28486.1; MGD; MGI:98301; Si.	Schriml L.M., Staubli F., Suzuki R., Tomita M. Schriml L.M., Staubli F., Suzuki R., Tomita M. Sakai K., Okido T., Furuno M., Aono H., Baldar Blake J., Boffelli D., Bojunga N., Carninci P. Brownstein M.J., Bult C., Fletcher C., Fujita Gustincich S., Hill D., Hofmann M., Hume D.A., Lyons P., Marchionni L., Mashima J., Mazzarell	[1] SEQUENCE FROM N.A. STRAIN=C57BL/6J; TISSUE=Embryo; STRAIN=C57BL/6J; TISSUE=Embryo; MEDLINE=21085660; PubMed=11217851; Kawai J., Shinagawa A., Shibata K., Yoshino M., Itc Kawai J., Shinagawa A., Fukunishi Y., Konno H., Adachi Arakawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S Saito T., Okazaki Y., Gojobori T., Bono H., Kasukaw Kadota K., Matsuda H.A., Ashburner M., Batalov S., Fleischmann W., Gaasterland T., Gissi C., King B., Fleischmann W., Gaasterland T., Risaido I., Pesole C	PRELIMINARY; (TrEMBLrel. 17, C (TrEMBLrel. 22, I (TrEMBLrel. 22, I (TrEMBLrel. 22, I (Mouse). (Mouse). (Mouse). (Mouse).
d M., Rodriguez ich C., Seya T., ich C., Seya T., ik.H., Weitz C., K., Hasegawa Y., K full-length mous	izuki R., Torici I., Aono H., Iga N., Carni Iga N., Carni etcher C., I etcher C., I	yo; 17851; ata K., yoshino l hi Y., Konno H., Ki, Kiyosawa H., yri T., Bono H., burner M., Batal T., Gissi C., Ki.	भे के बे
	Wagner L. Washio elli R., Barsh G., de Bonaldo M.F., M., Gariboldi M., Kamiya M., Lee N.H.	OOM N.A. 11/6J; TISSUE=Embryo; 185660; PubMed=11217851; 185660; PubMed=11217851; 181760; PubMed=11217851; 1817600; PubMed=11217851; 1817600; PubMed=11217851; 1817600; PubMed=11217851; 1817600;	PRT; 626 AA. eated) st sequence update) st annotation update) st annotation update) st annotation update; Murinae; Murinae; Mus.

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01-MAR-2002
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EMBL; AR005494; AA65733-6.1; --
EMBL; AP002560; BAB36533.1; --
Hypothetical protein; Complete
47-2-1-7-2-7-4 AA; 29288 MW;
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"Genome sequence of enterohaemorrhagic Escherichia coli O157:H7."
Nature 409:529-533(2001).
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01-MAR-2002 (TrEMBLrel. 20,
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19pothetical protein z3480.
Z3480 OR ECS3110.
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SMART; SM00089; PKD; 1.
PROSITE; PS50093; PKD; 1.
SEQUENCE 626 AA; 66301 MW;
                                                                                                                                                                                                                                                                                         Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoyi Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Tobe Inida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunag Kuhara S., Shiba T., Hattori M., Shinagawa H.; Wondara S., Shiba T., Hattori M., Shinagawa H.; "Complete genome sequence of enterohemorrhagic Escherichia coli 0157:H7 and genomic comparison with a laboratory strain K-12."; DNA Res. 8:11-22(2001).
 Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=21156231; PubMed=11258796;
                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=0157:H7 / RIMD 0509952;
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Bacteria, Proteobacteria, Gammaproteobacteria, Enterobacteriaceae, Escherichia.
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257E81A5E46A9489 CRC64;
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I., Tanaka M., Tobe T.,
             update)
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Q45818;
01-NOV-1996
01-NOV-1996
01-MAR-2003
                                                                                                                                                                                                            MEDLINE=20433268; PubMed=10976061;
Xiong J., Fischer W.M., Inoue K.,
"Molecular evidence for the early
                                                                                                                                                                                                                                                                                                   MEDLINE=94192803; PubMed=7511541;
Niedermeier G., Shiozawa J.A., Lottspeich
"The primary structure of two chlorosome p
                                                                                                                                                                                                                                                                                                                                                                                   Chloroflexus aurantiacus.
Bacteria; Chloroflexi; Chloroflexales; Chloroflexus.
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NAR-2003 (TrEMBLrel. 23, Last annotation updat
Hypothetical 33.7 kDa protein (BchGc).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Extensive mosaic structure revealed by the complete genome of uropathogenic Escherichia coli."; Proc. Natl. Acad. Sci. U.S.A. 99:17020-17024(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical protein; Complete SEQUENCE 549 AA; 61590 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Welch R.A., Burland V., Plunkett G. III, Redford P., Roesch
Rasko D., Buckles E.L., Liou S.-R., Boutin A., Hackett J., (
Mayhew G.F., Rose D.J., Zhou S., Schwartz D.C., Perna N.T.,
Mobley H.L.T., Donnenberg M.S., Blattner F.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=06:H1 / CFT073 / ATCC 70092
MEDLINE=22388234; PubMed=12471157;
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Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
                                                                                               Hypothetical protein.
SEQUENCE 305 AA; 33674 MW; F990F92F2D1C2B07 CRC64;
                                                                                                                                                                                                                                                                                        "The primary structure aurantiacus.";
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                                                            Similarity
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                                                           74.1%;
83.3%;
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100.0%;
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Pred. No.
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Pred. No. 43;
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FFEAB9B9CD22A8B6 CRC64;
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STRAIN-EI TOR N16961 / Serotype 01;

MEDLINE=20406833; PubMed=10952301;

MEDLINE=20406833; PubMed=10952301;

Heidelberg J.F., Eisen J.A., Nelson W.C., Clayton R.A., Gwinn M.L.,

Dodson R.J., Haft D.H., Hickey E.K., Peterson J.D., Umayam L.A.,

Gill S.R., Nelson K.E., Read T.D., Tettelin H., Richardson D.,

Ermolaeva M.D., Vamathevan J., Bass S., Qin H., Dragoi I., Sellers P.,

McDonald L., Utterback T., Fleischmann R.D., Nierman W.C., White O.,

Salzberg S.L., Smith H.O., Colwell R.R., Mekalanos J.J., Venter J.C.,

Fraser C.M.;
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MEDLINE=21992816; PubMed=11997336;

Bao Q., Tian Y., Li W., Xu Z., Xuan Z., Hu
Chen Y., Xue Y., Xu Y., Lai X., Huang L.,
Tan H., Chen R., Wang J., Yu J., Yang H.;
"A complete sequence of T. tengcongensis g
Genome Res. 12:689-700(2002).

EMBL; AB012988; AAM23457.1; -
                                                                                                                                                                                                                                                         Nature 406:477-483(2000).
EMBL; AE004294; AAF95373.1; -.
TIGR; VC2229; -.
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                                                                                                                                    Pfam; PF00310; GATase_2; 1.—
Hypothetical protein; Complete proteome.
SEQUENCE 281 AA; 31824 MW; 7CA75AD3494DFDD0
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Bacteria; Firmicutes; Clostridia; Thermoanaerobacteriales;
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01-JUN-2002
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                                                                                                                                                                                                                        IPR000583; GATase_2.
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98 AA; 11135 MW; 01317FFC55898A13
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                                                                                    Length 281;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 98;
                                                                                                                                             CRC64;
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Ling L.,
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ID QRORA3

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DT 01-J-J

DT 01-J-J

DT 01-M

DR Majo

GN L1.

OS Huma

OC Papi:

OC Papi:

OX NCBI

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01-MAR-2003
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SEQUENCE
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Q8QR33;
                                                                                                                                                                                                      NON TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Major capsid protein L1 Human papillomavirus. Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL, AF489719; AAL88647.1; --
InterPro; IPR002210; PV_capsid_L1.
Pfam; PF00500; late_protein_L1; 1.
ProDom; PD000544; PV_capsid_L1; 1.
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Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                      InterPro; IPR002210; PV_capsid_L1.
Pfam; PF00500; late_protein_L1; 1.
ProDom; PD000544; PV_capsid_L1; 1.
                                                                                                                                                                                                                                                                                                                                             "Skin HPV found on foreheads.";
Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases
EMBL; AY009882; AAG27044.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=FA50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-MAR-2001
01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9DWY8;
01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8XMG6D
                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Papillomavirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Forslund O., Ly H., Reid C., Higgins G.; "Human papillomavirus DNA in tumors, perilesional and buttock skin immunocompetent and immunosuppressed patients."; Submitted (FBB-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=FAIMVS12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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                                                   Similarity
5; Conserv
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5; Conservative
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   MGQYWQV
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(TrEMBLrel. 21, Last sequence up
(TrEMBLrel. 23, Last annotation
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                                                         Conservative
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71.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                              Simon M.,
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                                                         1; Mismatches
                                                                                    Score 41; DB
Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 41;
Pred. No.
                                                                                                                                                                        F1D5BC6307D39062 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Hansson
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                                                                                                            DB 12;
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Query Match
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"Identification and characterisation of the bo
alpha, beta and gamma.";
Submitted (SEP-2001) to the EMBL/GenBank/DDBJ
-!- SIMILARITY: BELONGS TO THE SER/THR FAMILY
EMBL; AJ414556; CAC93687.1; --
InterPro; IPR000719; Prot kinase.
InterPro; IPR0002290; Ser_thr_pkinase.
InterPro; IPR001245; Tyr pkinase.
InterPro; IPR001245; Tyr pkinase.
                                                                                                        STRAIN=FA55;

STRAIN=FA55;

Antonsson A., Hossain S., Simon M., Hansson B.G.;

"Skin HPV found on foreheads.";

Submitted (OCT-2000) to the EmBL/GenBank/DDBJ databases.

EMBL; AY009886; AAG27048.1; -.

Interpro; IPR002210; PV capsid L1.

Pfam; PF00500; late protein L1; 1.

ProDom; PD000544; PV_capsid_L1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0109; TYRKINASE.

PRINTS; PRO01091; PROt kinase; 1.

PROSITE; PS00101; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00108; PROTEIN_KINASE_ST; 1.

ATP-binding; Kinase; Serine/threonine-protein kinase; Transferase.

SEQUENCE 756 AA; 86647 NW; A072D15814A176E5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2001 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
Major capsid protein L1
                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                 Viruses; dsDNA viruses, Papillomavirus.
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01-MAR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IKB
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01-MAR-2003 (TrEMBLrel.
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01-DEC-2001
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WGEYWDV 48
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                           69.08;
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19,
23,
                                                                        MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA stage;
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Last annotation update)
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Pred. No.
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                                                                        8A994051AD736407 CRC64;
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he bovine
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RESULT 12

QBZCH5

ID QBZCH5

ID QBZCH5;

ID CHAR-2002 (TrEMBLrel. 20, Created)

DT 01-MAR-2002 (TrEMBLrel. 20, Last sequence update)

DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)

DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)

E Sulfate transport system permease protein CysT (Inner DE permease T of sulfate/thiosulfate ABC transporter).

GN CYST OR YPO3014 OR CYSU OR Y1467.
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Q8XBJ6
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Best Local
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                                                                                                                                                                                                                                                                                                                                         SEQUENCE
SEQUENCE
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Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoya Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoya Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Yasunaç Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunaç Kuhara S., Shiba T., Hattori M., Shinagawa H.;
"Complete genome sequence of enterohemorrhagic Escherichia coli "Complete genomic comparison with a laboratory strain K-12.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-0157:H7 / EDL933 / ATCC 700927;

MEDLINE=21074935; PubMed=11206551;

Perna N.T., Plunkett G. III, Burtland V., Mau B., Glasner J.D.,

Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A.,

Posfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller L.,

Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K.,

Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C.,

Welch R.A., Blattner F.R.;

"Genome sequence of enterohaemorrhagic Escherichia coli O157:H7."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sulfate, thiosulfate transport system CYSU OR Z3689 OR ECS3295.
Escherichia coli O157:H7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0157:H7 and genomic comparison
DNA Res. 8:11-22(2001).
EMBL; AE0055472; AAG57542:1; -.
EMBL; AP002561; BAB36718:1; -.
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Enterobacteriaceae; Escherichia.
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01-MAR-2002 (TrEMBLrel. 20, Last sequence up
01-MAR-2003 (TrEMBLrel. 23, Last annotation
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01-MAR-2002
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PROSITE; PS00402; BPD_TRANSP_INN_MEMBR; 1.
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TIGRFAMs; TIGR00969; 3a0106s02; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000515; BPD transp.
InterPro; IPR005667; Sulph transpt2.
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71.4%;
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                                                                                                                                                                                                                                                                                                        DB 16;
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ſ., Tanaka M., Tobe T.,
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Best Local
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Sulfate transport system permease protein cycm CYSU OR C2958
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Complete
SEQUENCE
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Parkhill J., Wren B.W., Thomson N.R., Titball R.W., Holden M.T.G.,
Prentice M.B., Sebaihia M., James K.D., Churcher C., Mungall K.L.,
Baker S., Basham D., Bentley S.D., Brooks K., Cerdeno-Tarraga A.M.,
Chillingworth T., Cronin A., Davies R.M., Davis P., Dougan G.,
Feltwell T., Hamin N., Holroyd S., Jagels K., Karlyshev A.V.,
Leather S., Moule S., Oyston P.C.F., Quail M., Rutherford K.,
Simmonds M., Skelton J., Stevens K., Whitchead S., Barrell B.G.,
                                                                                                                                                  MEDLINE=22388234; PubMed=12471157;
Welch R.A., Burland V., Plunkett G. III, Redford P., Roesch Welch R.A., Buckles E.L., Liou S.-R., Boutin A., Hackett J., Rasko D., Buckles E.L., Liou S., Schwartz D.C., Perna N.T., Mayhew G.F., Rose D.J., Zhou S., Schwartz D.C., Perna N.T., Mobley H.L.T., Donnenberg M.S., Blattner F.R.,
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STRAIN-KIM5 / Biovar Mediaevalis;
MEDLINE-22137863; PubMed-12142430;
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STRAIN=CO-92 / Bio
  Proc. Natl. Acad. Sci. U.S./
EMBL/ AE016764; AAN81408.1;
Complete proteome.
SEQUENCE 277 AA; 30360 My
                                                                             "Extensive mosaic structure revealed by of uropathogenic Escherichia coli."; Proc. Natl. Acad. Sci. U.S.A. 99:17020-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8FFB2
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                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
STRAIN=06:H1 / CFT
                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=217992;
                                                                                                                                                                                                                                                                                                                                                                                                              Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Escherichia.
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J. Bacteriol. 184:4601-4611(2002).

ZMBL; AJ41454; CAC92257.1; -..

ZMBL; AE013749; AAM85038.1; -.
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TE; PS00402; BPD_TRANSP_INN_MEMBR; 1.
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277 AA;
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Pred. No. 1.1e+02;
1; Mismatches 1
                                                                                   99:17020-17024 (2002)
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  B58FE3C6103F554D CRC64;
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Matson J.S., 1
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RESULT 15
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GN Synec
OC Bacte
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RN [1]
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
STRAIN=KIM5 / Biovar Mediaevalis;
STRAIN=E22137863; PubMed=12142430;
Deng W., Burland V., Plunkett G. III, Boutin A., Perna N.T., Rose D.J., Mau B., Zhou S., Schwartz Fetherston J.D., Lindler L.E., Brubaker R.R., Pla Fetherston J.D., Cindler L.E., Brubaker R.R., Pla Fetherston J.D., Cindler L.E., Naubaker R.R., Matson
                                                                                    01-MAR-2003
01-MAR-2003
T110772 prot
                                                                                                                                                                           Q8DKT3;
Q8DKT3;
01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8ZJG2;
01-MAR-2002
01-MAR-2002
01-MAR-2003
              Synechococcus elongatus
Bacteria; Cyanobacteria;
NCBI TaxID=32046;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Parkhill J., Wren B.W., Thomson N.R., Titball R.W., Holden M.T.G., Prentice M.B., Sebaihia M., James K.D., Churcher C., Mungall K.L., Baker S., Basham D., Bentley S.D., Brooks K., Cerdeno-Tarraga A.M., Chillingworth T., Cronin A., Davies R.M., Davis P., Dougan G., Chillingworth T., Kronin A., Davies R.M., Davis P., Dougan G., Feltwell T., Hamlin N., Holroyd S., Jagels K., Karlyshev A.V., Leather S., Moule S., Oyston P.C.F., Quail M., Rutherford K., Simmonds M., Skelton J., Stevens K., Whitehead S., Barrell B.G.; "Genome sequence of Yersinia pestis, the causative agent of plague."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Bacteriol. 184:4601-4611(2002). EMBL; AJ414141; CAC89009.1; -. EMBL; AE013997; AAM87469.1; -. Typothetical months:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bacteria; Proteobacteria; Gam
Enterobacteriaceae; Yersinia
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical protein; SEQUENCE 313 AA; 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=CO-92 / Biovar Orientalis;
MEDLINE=21470413; PubMed=11586360;
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                                                                                                                                                                                                                                                                                                                                                                                                                               69.0%;
nilarity 66.7%;
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(TrEMBLrel. 20, Last sequence update)
(TrEMBLrel. 23, Last annotation update)
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71.4%;
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Last sequence update)
Last annotation update)
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69A851CC8B35E26F
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1.1e+02;
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                                              Synechococcus
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Okumura S.,

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N [1]
N [1]
P SEQUENCE FROM N.A.

(P STRAIN=Goel / Gol / ATCC BAA-19y , __

RC STRAIN=Goel / Gol / ATCC BAA-19y , __

RX MEDLINE=Z121087; PubMed=12125824;

RX MEDLINE=Z121087; PubMed=12125824;

RA Deppenmeier U., Johann A., Hartsch T., Merkl R., Schmitz K.,...

RA Martinez-Arias R., Henne A., Wiezer A., Baeumer S., Jacobi C.,

RA Brueggemann H., Lienard T., Christmann A., Boemecke M., Steckel

RA Brueggemann H., Lienard T., Christmann R., Boemecke M., Steckel

RA Brueggemann H., Lienard T., Christmann R., Boemecke M., Steckel

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RA Brueggemann H., Lienard T., Christmann R., Beeumer S., Jacobi C.,

RA Brueggemann H., Lienard T., Christmann R., Beeumer S., Jacobi C.,

RA Brueggemann H., Lienard T., Christmann R., Beeumer S., Jacobi C.,

RA Brueggemann H., Lienard T., Christmann R., Beeumer S., Jacobi C.,

RA Brueggemann H., Lienard T., Christmann R., Beeumer R., Beeumer R., Ra Beeumer S., Jacobi C.,

RA Brueggemann H., Lienard T., Christmann R., Beeumer R.
                       RESULT 17
P74474
ID P7447
AC P7447
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ID Q8PUV
AC Q8PUV
AC Q8PUV
AC Q8PUV
DT 01-OC
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                          Synechocystis sp.
                                                           SLR1924
                                                                                D-alanyl-D-alanine
                                                                                                                01-FEB-1997
01-MAR-2003
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01-FEB-1997
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Nakamura Y., Kanel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=BP-1
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AP005371; BAC08323.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
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Cato S., Ikeuchi M.,
                          (strain PCC
                                                                          Lrel. 02, Last sequence update)
Lrel. 23, Last annotation updatcarboxypeptidase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36246 MW;
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Last sequence update)
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Pred. No.
                          6803)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
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Baeumer S., Jacobi C.,
A., Boemecke M., Stecke
R., Klenk H.-P., Gunsal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kimura T.,
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                                                                                                             update)
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, Nakazaki N.,
Tabata S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
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Steckel S.
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Best Local
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01-JAN-1998 (TrEMBLrel. 05, Last sequence up
01-MAR-2003 (TrEMBLrel. 23, Last annotation
Preprocathepsin C precursor (EC 3.4.14.1).
                                                                                Hydrolase;
SIGNAL
                                                                                                                                  PRINTS; PRO0705; PAPAIN.

PRODOM; PD000158; Peptidase C1; 1.

SMART; SM00645; Pept C1; 1.

PROSITE; PS00139; THIOL PROTEASE CYS; PROSITE; PS00639; THIOL_PROTEASE_HIS;
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MEDLINE=97061201; PubMed=8905231;

Kaneko T., Sato S., Kotani H., Tanaka A., Asamizu E., Nakamura Y.,

Kaneko T., Sato S., Kotani H., Tanaka A., Asamizu E., Nakamura Y.,

Miyajima N., Hirosawa M., Sugiura M., Sasamoto S., Kimura T.,

Miyajima N., Hirosawa M., Sugiura M., Sasamoto S., Kimura T.,

Miyajima N., Hirosawa M., Sugiura M., Nakazaki N., Naruo K., Okumura Shimpo S., Takeuchi C., Wada T., Watanabe A., Yamada M., Yasuda M.,
                                                                                                                                                                                                                                                                  InterPro; IPR000668; Peptidase_C1.
InterPro; IPR000169; SHprot acsite.
Pfam; PF00112; Peptidase_C1; 1.
PRINTS. PROOTOR: DEDITA
                                                                                                                                                                                                                                                                                                                                                                                              "Cathepsin C from Schistosoma japonicum: cDNA preproenzyme and phylogenetic relationships."; Eur. J. Biochem. 25:527-534(1998).
EMBL; U77932; AAC32040.1; -.
HSSP; P00787; 1THE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=97442731; PubMed=9297696; Brindley P.J., Kalinna B.H., Dalton J.P., Smythe M.L., McManus D.P., "Proteolytic degradation of host hemoglob:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schistosoma japonicum (Blood fluke).
Eukaryota; Metazoa; Platyhelminthes;
Schistosomatoidea; Schistosomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              018533
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Pfam; PF00144; beta-lactamase; 1.
Carboxypeptidase; Complete proteome.
SEQUENCE 400 AA; 44316 MW; 75510481820E462F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synechocystis sp. strain PCC6803. II. Sequence determination of the entire genome and assignment of potential protein-coding regions.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=1148;
                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hola-Jamriska L.,
Brindley P.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=Chinese;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=Chinese;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Cyanobacteria; Chroococcales; Synechocystis.
                                                                                                                                                                                                                                                                                                                                                                       MEROPS; C01.070;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=98409270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=6182;
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                                                     Protease; Signal; Thiol protease

1 22 POTENTIAL.
222 458 CATHEPSIN C.
                       222
458 I
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                degradation of host hemoglobin Parasitol. 89:1-9(1997)
                          AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tort J.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   s of the genome of the unicellular cyanobacterium strain PCC6803. II. Sequence determination of the
                             52698
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Pred. No.
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                             ADA9765666C4142C CRC64;
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Trematoda; Digenea; Strigeidida; Schistosoma.

Day

S.R.,

Wong

by schistosomes.";

458

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update)

DB 16; .1.6e+02;

Length 400 Indels

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J.P.,

Day S.R.,

Fan J.,

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RESULT 20
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DE Ribit
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GN ATU44
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Best Local S
Matches 5
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STRAIN-cv. Columbia;

STRAIN-cv. Columbia;

Vysotskaia V.S., Osborne B.I., Toriumi M., Yu G., Oji O., Shorne B.I., Toriumi M., Yu G., Oji O., Shorne B.I., Dewar K., Feng J., Kim C., Buehler E., Conway A.B., Conway A.R., Dewis R.W., Ecker J.R., Kurtz D., Li Y., Shinn P., Sun H., Davis R.W., Ecker J.R., Federspiel N.A., Theologis A.;

Federspiel N.A., Theologis A.;

"The sequence of BAC F5I14 from Arabidopsis thaliana chromosome Submitted (APR-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                               Q8U7J6;
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01-JUL-1997
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            004483;
                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AC001229; AAB60915.1; -.
InterPro; IPR001878; Znf CCHC.
Pfam; PF000098; zf-CCHC; I.
SMART; SM00343; Znf C2HC; 1.
SEQUENCE 489 AA; 56649 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE F
STRAIN=CV.
MEDLINE=21608550; PubMed=11743193; Wood D.W., Setubal J.C., Kaul R., Monks D.E., Kitajima Wood D.W., Setubal J.C., Mood G.E., Almeida N.F. J Okura V.K., Zhou Y., Chen L., Wood G.E., Almeida N.F. J Chen Y., Paulsen I.T., Eisen J.A., Karp P.D., Bovee D. Chapman P., Clendenning J., Deatherage G., Gillet W., G
                                                                                                                                                                       01-JUN-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arabidopsis thaliana (Mouse-ear cress).

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotytedons; core eudicots; Rosid

eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                  SEQUENCE FROM N.A.
                                                                                                                     Bacteria; Proteobacteria;
                                                                                                                                 ATU4453 OR AGR L 826.
Agrobacterium tumefaciens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Theologis
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                                                                                                           Rhizobiaceae;
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5; Conserv
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                                                                                                                                                                                                                                                                                             VWGSYWK 363
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Columbia;
                                                                                                                                                                                                                                                                                                                                                69.0%;
larity 71.4%;
Conservative
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EMBL; AE008240; AAK88997.1; -.
InterPro; IPR000577; FGGY kin.
InterPro; IPR006003; Pentulose_kinase
Pfam; PF00370; FGGY; 1.
Pfam; PF02782; FGGY_C; 1.
TIGRPAMs; TIGR01315; SC_CHO_kinase; 1
                                                                                                                                                                                                                                                                                                                                              Q9SHY8
Q9SHY8;
01-MAY-2000
01-MAY-2000
01-MAR-2002
                                                                              SEQUENCE FROM N.A.

Chao Q., Shinn P., Dunn P., Buehler E., Kahn S., Kim C., Wall Williams S., Altafi H., Araujo R., Conn L., Conway A.B., Gon: Hansen N.F., Huizar L., Kremenetskaia I., Lenz C., Li J., Lit Luros S., Rowley D., Schwartz J., Toriumi M., Vysotskaia V., Davis R.W., Federspiel N.A., Theologis A., Ecker J.R.; "Genomic sequence for Arabidopsis thaliana BAC FIE22."; "Genomic sequence for Arabidopsis thaliana BAC FIE22."; Submitted (OCT-2000) to the EMBL/GenBank/DDBJ databases.

EMBL, AC007234; AAF23844.1; -

EMBL, AC007234; AAF23844.1; -

EMBL, AC007234; AAF2384.1; -

EMBL, AC007234; AFECSUC. 1
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                                                                                                                                                                                                                                                                          Arabidopsis thaliana (Mouse-ear cress).

Bukaryota; Viridiplantae; Streptophyta; Embryophyta;

Spermatophyta; Magnoliophyta; endicotyledons; core e
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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Science 294:2323-2328(2001)
                                                                                                                                                                                                                                                          NCBI_TaxID=3702;
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Pred. No. 2.1e+02;
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2.2e+02;
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edons; core eudicots; Rosid
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InterPro; IPR003593; AAA, ATPage.
InterPro; IPR001140; ABC_TM_transpt.
InterPro; IPR003439; ABC_transporter.
InterPro; IPR003439; ABC_transporter.
InterPro; IPR002078; Sig54_interact.
Pfam; PF00664; ABC_membrane; 1.
Pfam; PF000005; ABC_tran; 1.
ProDom; PD00006; ABC_transporter; 1.
SMART; SM00382; AAA; I.
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                                                                        "Genome sequence of the nematode C. elegans: a platform for investigating biology. The C. elegans Sequencing Consortium.", Science 282:2012-2018(1998).
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01-NOV-1999 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
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01-MAR-2002 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
                               SEQUENCE FROM N.A.
                                                                                                                                                                        STRAIN=Bristol N2;
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                    Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
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PROSITE; PS00675; SIGMA54 INTERACT_1; 1.
ATP-binding; Complete proteome.
SEQUENCE 580 AA; 66605 MW; AB278D7AE;
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Watanabe A., Iriguchi M., Ishikawa A., Kawashi
Kishida Y., Kohara M., Matsumoto M., Matsuno I
Nakazaki N., Shimpo S., Sugimoto M., Takazawa
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Bacteria; Cyanobacteria; Nostocales; Nostocaceae; Nostoc
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EMBL; AR002197; AAD34660.1; -.
WOOTNPep; F20H11.2; CE20701.
InterPro; IPR001650; Helicase_C.
Pfam; PF00271; helicase_C; 1.
ATP-binding; Helicase; Hydrolase.
SEQUENCE 1451 AA; 161681 MW; BC
                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00207; A2M; 1.
Pfam; PF01835; A2M N; 1.
Pfam; PF00050; kazal; 1.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical protein KIAA1283 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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"The sequence of C. elegans cosmid F20H11.";
Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                    Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS00477; ALPHA_2_MACROGLOBULIN;
                                                                                                                                                                                                                                                                                                                                                                                                               SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Prediction of the coding sequences of unidentified human genes. The complete sequences of 100 new cDNA clones from brain which co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              **ISSUE=5.ca.**,
MEDLINE=20039619; PubMed=10574462;
Nacase T., Ishikawa K., Kikuno R., Hirosawa M., Nomura N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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STRAIN=Bristol N2;
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InterPro; IPR001599; MacrogloblnA2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for large proteins in vitro."; DNA Res. 6:337-345(1999).
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kazāl.
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75.0%;
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Pred. No.
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Pred. No. 5.
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7.5e+02;
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AC Q8IZJ3;
DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Alpha-2 macroglobulin family protein VIP.
OS Homo sapiens (Human).
OC ELKARYOCE; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TAXID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RA Li Z., Wu X., Engvall E.;
RT "Cloning and expression of VIP, a novel alpha 2 macroglobulin family
RT member.";
RI Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
SQ SEQUENCE 1885 AA; 206655 MW; 3FB4A8551FBF326D CRC64;
Query Match
Best Local Similarity 75.0%; Pred. No. 7.6e+02;
Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps
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OY 1 KVWGQYWQ 8
Db 101 KVWGRGWQ 108
Search completed: August 14, 2003, 09:10:13
Job time: 62 secs
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-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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168.237 Million cell updates/sec
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em_htgo_other:*	em_htgo_mus:*	em_htgo_hum:*	em_sy:*	H	em_htg_mam:*	ht	em_htg_pln:*	em_htg_mus:*			em_htg_hum:*	em_vi:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result

Query

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ALIGNMENTS

RESULT 1

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AR269285
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Adema,G.J. and Figdor,C.G.
Melanoma associated antigenic polypo
vaccines against melanoma
Patent: US 6500919-A 9 31-DEC-2002;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AKZO NOBEL NV (NL)

Other publication ZA 9501239 951019

Other publication JP 7278193 951024

Other publication FI 950665 950817

Other publication CA 2142575 950817

Other publication AU 1227295 950824.
                                                                                                                                     Unknown.
Unclassified
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/mol type="genomic DNA"
/db xref="taxon:32644"
/cell_type="MELANOCYT"
/tissue_type="MELANOMA"
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conflict with the conceptual translation"
                                organism="unknown"
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Sequence 1 from Patent WO0130847.
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Modified gp100 and uses thereof
Patent: WO 0130847-A 1 03-MAY-2001;
Aventis Pasteur Limited (CA)
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                                                                                  Patent: WO 0130382-A 109 03-MAY-2001; Aventis Pasteur Limited (CA)
                                                                                                                         Berinstein, N., Tartaglia, J., Method of inducing and/or enl
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/organism="synthetic construct"
/mol_type="genomic DNA"
/mb xref="taxon:32630"
/noTe="modified gp100"
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/mol_type="genomic DNA"
/db_xref="taxon:32630"
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PRI 13-MAY-2003

Hines,L., Eisenstein,S.,
ey,T., LaBaer,J., Lin,Y.,

System Donor

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REFERENCE
AUTHORS
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1 LysThrTrpGlyGlnTyrTrpAlaVal
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Enhancing the immune response to an antigen by presensitizing with an inducing agent prior to immunizing with the inducing agent and
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TGSLGPLLDGTATLRLVKRQVPLLDCVLYKRYGSFSVTLDIVQGLISAEILQAVPSGEGD
AFELTYSCQGGLIPKEAQMEISSPGCQPPAQRILCQPVLPSPACQLVLHQILKGGSGTYC
LNVSLADTNSLAVVSTQLIMPGGEAGLCQVPLIVGILLVMAVVLASLIYRRLMKQD
FSVPDLPHSSSHMLRLPRIFCSCPIGENSPLLSGQQV"
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/protein_id="CAC38954.1"
/db_xref="GI:14139698"
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/db_xref="taxon:32630"
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Kalnine,N., Chen,X., Rolfs,A., Halleck,A., Hines,L., Eisenstein,S.,
Koundinya,M., Raphael,J., Moreira,D., Kelley,T., LaBaer,J., Lin,Y.,
Phelan,M. and Farmer,A.
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Kalnine, N., Chen, X., Rolfs, A., Halleck, A., Hines, L.,
Koundinya, M., Raphael, J., Moreira, D., Kelley, T., LaB
Phelan, M. and Farmer, A.
Cloning of human full-length CDSs in BD Creator(TM)
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Mammalia; Eutheria; Primates;
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BT007202.1 GI:30583242
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                                                                                                                                                                                                                FSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQV"
554 c 550 g 451 t
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AFELTVSCQGGLPKEACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYC
LNVSLADTNSLAVVSTQLIMPGQEAGLGQVPLIVGILLVLMAVVLASLIYRRRLMKQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="silver homolog (mouse)"
/protein_id="AAP35866.1"
/db_xref="GI:30583243"
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/clone="GH00199X1.0"
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mol_type="mRNA"
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note="Vector: pDNR-Dual"
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This CDS clone is a part of a collection of human full length expression clones generated by BD Biosciences Clontech and the Harvard Institute of Proteomics. Each CDS has been cloned in two forms: with and without stop-codon (to allow fusion with C-terminal tag). The CDS has been directionally cloned using BD In-Fusion(TM) cloning system between the Sall and HindIII sites of the pDNR-DUAL vector. Additional sequences in the clone: 'ACC' after Sall site
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Cloning of human full-length CDSs in BD Creator(TM) System Donor
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synthetic construct
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and before 'ATG' to provide Kozak consensus sequence; 'GG' after last codon and before HindIII site to maintain reading frame. Clone distribution: http://bioinfo.clontech.com/orfclones.
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                                                                                                            TTPGQAPTAEPSĞTTSVQVPTTEVISTAPVQMPTAESTGMTPEKVPVSEVMGTTLAEM
STPEAFGMTPAEVSIVVLSGTTAAQVTTTEWVETTARELDI PEPEGPDASSIMSTESI
TGSLGPLLDGTAPTLELVKRQVPELDCULYRYGSFSSVTLDI VQGIESAEILQAVPSGEGD
AFELTVSCQGGLPKEACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYC
                                                                                                                                                                                                                        QVLGGPVSGLSIGTGRAMLGTHTMEVTVYHRRGSRSYVPLAHSSSAFTITDQVPFSVS
VSQLRALDGGNKHFLRNQPLTFALQLHDPSGYLAEADLSYTWDFGDSSGTLISRALVV
THTYLEPGPVTAQVVLQAAIPLTSCGSSPVPGTTDGHRPTAEAPNTTAGQVPTTEVVG
                                                    LNVSLADTNSLAVVSTQLIMPGQEAGLGQVPLIVGILLVLMAVVLASLIYRRRLMKQD
FSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQVL"
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/trānslation="mdlvlkrcllhlavigallavgatkvprnqdmlgvsrqlrtkaw/
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                                                                                                                                                                                                                                                                                                                                                                                           producT="Homo sapiens silver homolog (mouse)"
/protein_id="AAP36663.1"
/db_xref="GI:30584821"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=1
/transl_table=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note="Mutations: 1985:Stop->Leu"
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/note="Vector: pDNR-Dual"
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sapiens silver homolog (mouse) mRNA,
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Submitted (16-SEP-1993) Michael G. Neubauer, Bristol-Myers Squibb
Pharmaceutical Research Institute, 3005 1st Ave, Seattle, WA 9812:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 2023)
Maresh,G.A., Marken,J.S., Neubauer,M., Aruffo,A., Hellstrom,I.,
Hellstrom,K.E. and Marquardt,H.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cloning and expression of the gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
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                   437
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                   QJ
                                                                                                                /translation="MDLVLKRCLLHLAVIGALLAVGATKVPRNODMLGVSRQLRTKAW
RQLYFEWTEAQRLDCWRGGQVSLKVSNDGFTLIGANASFSIALNF PGSQKVLPDGQV
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QVLGGPVSGLSIGTGRAMLGTHTMEVTVYHRRGSRSYVPLAHSSSAFTIIDQVPFSVS
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THYLEPGPVTAQVLQAAIPLTSGGSSPVGTTDGHRFTABAPNTTAQVPFTEVIS
TYLEPGPVTAQVLQAAIPLTSGGSSPVGTTDGHRFTABAPNTTAQVPTTLAAM
STPEATGMTPAEVSIVLGAATTLACMGTTSAQVTTTEWUSTTABELFIPERGPDASSINGTTLAAM
STPEATGMTPAEVSIVLLGGTTAAQVTTTEWUSTTABELFIPERGPDASSINGTESI
TGSLGPLLDGTATLALVKRQVFLDCVLLYRYGSFSVTLDIVGGIESAEILQAVPSGGGGTYC
RSGLGPLLDGTATLALVKRQVFLDCVLLYRYGSFSVTLDTUGHLEADH
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                                                             79.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mol_type= """....9606"

'db_xref="taxon:9606"

/clone="hf12-2"

"--lanoma"
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1. .2026
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Homo sapiens"
mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                standard_name="melanoma-associated ME20 antigen"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone
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REFERENCE
AUTHORS
TITLE
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HUMGPMSS
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RESULT 10
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Best Local Similarity:
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No.:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            by A.Vogel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Draft entry and computer-readable sequence for [1] kindly submitted by A.Vogel, 23-FEB-1990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Original source text: Human melanoma cell line, cDNA to mRNA, clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 melanocyte-specific
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                                    AAGACCTGGGGCCAATACTGGCAAGTT 507
                                                               LysThrTrpGlyGlnTyrTrpAlaVal 9
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INSTESITGSLGPLLGTATLALVKRQVPLDCVLYRYGSFSVTLAELVJAGSISAEILQA
/TRANSTPRAFTTTTGGGGSTATLALVKRQVPLDCVLYRYGSFSVTLAELVJAGSISAEILQA
/TRANSTPRAFTTTTGGGGSTATLALVKRQVPLDCVLYRYGSFSVTLAELVAGSTAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2114 bp mRNA linear PRI 27-, kD melanocyte-specific secreted glycoprotein mRNA,
                                                                                                                                                                                                                                                                                                                                RRLMKQDFSVPQLPHSSSHWLRLPASSALVPLVRIAPSSVGSRSEYSHMML"
                                                                                                                                                                                                                                                                                                                                               VPSGEGDAFELTVSCQGGLPKEACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILK
GGSGTYCLNVSLADTNSLAVVSTQLIMPGQEAGLGQVPLIVGILLVLMAVVLASLIYR
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1. .2114
                                                                                                         x HUMGPMSS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Homo sapiens"
mol_type="mRNA"
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RESULT 11
AR269281
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KEYWORDS
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AUTHORS
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SOURCE
ORGANISM
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                                               Sequence 1
AR269281
                                                                                                                                                                              1 LysThrTrpGlyGlnTyrTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Other publication ZA 9501239 951019 Other publication JP 7278193 951024 Other publication FI 95065 950817 Other publication CA 2142575 950817 Other publication (AU 1277295 950824
Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Melanoma associated antigenic polypeptide, epitopes thereof and vaccines against melanoma Patent: EP 0668350-A 1 23-AUG-1995; AKZO NOBEL NV (NL)
                                 AR269281.1
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                                                                                  AR269281
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ma,G.J. and Figdo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGSLGPLLDGTATLRLVKRQVPLDČVLYRYGSFSVTLDIVQĞIESAEILQAVPSGEĞD AFELTYSCQGGLPKEACMEISSPGCQPPAQRLCQPV1LPSPACQLVLHQ1LKGGSGTYC LNVSSLADTNSLAVVSTQLIVPSQPACGLGQVPLIVGILLVLMAVVLASLIYRRRLMKQD FSVPQLPHSSHWLRLPRIFCSCPIGENSPLLSGQQV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INQLYPEWTEAORLDCWRGGQVSLKVSNDGPTLIGANASFSIALNFPGSQKTLPDGQV
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                                                                                                                                                                                                                                                                                                                                                                                                                       /function="TRANSMEMBRANE REGION"
587 c 575 g 484 t
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                                                                                                                                                                                                                          x A45993 (1-2115)
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RESULT 13
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Sequence 1 from Patent WO0170767.
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Sequence 1 from patent US 6287569
AR167365
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Adema,G.J. and Figdor,C.G.
Melanoma associated antigenic polypeptide,
vaccines against melanoma
Patent: US 6500919-A 1 31-DEC-2002;
Location/Qualifiers
         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                Homo sapiens
                                                                AX274950.1 GI:16547582
                                                                                                                                                                                                                                                                                                                                                        Vaccines with enhanced intracellular Patent: US 6287569-A 1 11-SEP-2001;
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Kipps, T.J. and Wu, Y.
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                                         Homo sapiens (human)
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Query Match:
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                                                                                                                                                                                                                                                                               Patent: WO 0192294-A 1 06-DEC-2001; GENZYME CORPORATION (US)
                                                                                                                                                                                                                                                                                                                    Nicolette, C.A.
Therapeutic anti-melanoma compounds
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Mammalia; Eutheria;
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                                                                                                                                                     /organism="Homo sapiens"
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/db_xref="taxon:9606"
587 c 575 g 48
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QVLGGPGSLSIGTGRAMLGTHTMEVTVYHRRGSRS VETHABSAFTI TDQVPFSVS
VSQLRALDGGMKHFIRNQPLIFFALQLHDPSGYLABADLSYTMDFGDSSGTLI SRALVY
THTYLEFGFVTAQVVLQAAI FLTSCGSSFVFGTTDGHRPTAEAPNTTAGQVFTTEVVG
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NRQLYPEWTEAQRLDCWRGGQVSLKVSNDGPTLIGANASFSIALNFPGSQKVLPDGQV
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gp100=melanocyte lineage-specific antigen/Pmell7 homolog [human, mRNA, 2130 nt].
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J. Biol. Chem
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TGSLGPLLDGTATLALVKRQVPLDCVLYRYGSFSVTLDI VQGIESAEILQAVPSGEGD
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VSQLRALDGGMKHFLRNQPLIFFALQLHDPSGYLAEADLSYTWDFGDSSGTLISRALVV
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22. .2007
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mol_type="mRNA"
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Human Pmel 17 mRNA, complete c
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M77348
M77348.1 GI:190105
Pmel 17 protein; melanocyte.
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Sequence 3 from Patent EP1222928.
AX474662
AX474662.1 GI:22214011
                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eu
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; H
1 (bases 1 to 2131)
Kwon, B.S., Chintamaneni, C., Kozak, C.A., Copeland, N.G.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  especially melanoma
Patent: EP 1222928-A 3 17-JUL-2002;
Universitaet Zuerich Institut fuer
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                         Gilbert,D.J., Jenkins,N., Barton,D.,
Kim,K.K.
                                                                                                                                   Homo sapiens
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melanocyte-specific gene, Pmel 17, maps near the silver coat
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LNVSLADTNSLAVVSTQLIMPVPGILLTGQEAGLGQVRLIVGILLVLMAVVLASLIYR
RRLMKQDFSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQV"
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STPEATGMTPAEVSIVVLSGTTAAQVTTTEWVETTARELPIPEPEGPDASSIMSTESI
TGSLGPLLDGTATLRLVKRQVPLDCVLYRYGSFSVTLDIVQGIESAEILQAVPSGEGD
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VSQLRALDGGNKHFLRNQPLTFALQLHDPSGYLAEADLSYTWDFGDSSGTLISRAPVV
THTYLEPGPVTAQVVLQAAIPLTSCGSSPVPGTTDGHRPTAEAPNTTAGQVPTTEVVG
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IWVNNTIINGSQVWGGQPVYPQETDDACIFPDGGPCPSGSWSQKRSFVYVWKTWGQYW
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/mol_type="genomic DNA"
/db_xref="taxon:9606"
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/db_xref="GI:22214012"
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                                     Francke, U., Kobayashi, Y. and
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92021023
                                                   Submitted (12-DEC-2000) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                               BC001414 pmRNA linear PRI 1 IMAGE:3139788, mRNA, complete cds.
            NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                   Strausberg, R.
Direct Submission
                                                                                                                                                       Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 2134)
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STPEATGMTPAEVSIVVLSGTTAAQVTTTEMVETTARELLPIPEBEGPDASSIMSTESI
TGSLGPLLDGTATLALVKRQVPLDCTLYRYGSESVTLDIVGGTESAETIQAVBSGEGD
AFELTVSCQGGLPKEACMEISSPGCQPPAQRLCQPVLPSPACQLVLHQILKGGSGTYC
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VSQLRALDGGNKHFLRNQPLTFALQLHDPSGYLAEADLS YTWDFGDSSGTLI SRAPVV
THTYLEPGPVTAQVVLQAAI PLTSCGSS PVPGTTDGHRPTAEAPNTTAGQVPTTEVVG
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RRLMKQDFSVPQLPHSSSHWLRLPRIFCSCPIGENSPLLSGQQV"
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NRQLYPEWTEAQRLDCWRGGQVSLKVSNDGPTLIGANASFSIALNFPGSQKVLPDGQV
IWVNNTIINGSQVWGGQPVYPQETDDACIFPDGGPCPSGSWSQKRSFVYVWKTWGQYW
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/mol_type="mRNA"
/db_xref="taxon:9606"
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/codon_start=1
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/db_xref="GI:190106"
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/cell_type="melanocyte"
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This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 639589.
Location/Qualifiers
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Contact: nisc_mgc@nhgri.nih.gov
Shevchenko,Y., Wetherby,K.D., Becketrom-Sternberg,S.M.,
Benjamin,B., Blakesley,R.W., Bouffard,G.G., Brinkley,C., Brooks,S.,
Benjamin,B., Guan,X., Gupta,J., Ho,S.-L., Karlins,E., Legaspi,R.,
Dietrich,N.L., Guan,X., Gupta,J., Ho,S.-L., Karlins,E., Legaspi,R.,
Lim,M., Maduro,Q.L., Mastello,C., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Snyder,B., Stantripop,S., Thomas,P.J.,
Tiongson,E.E., Touchman,J.W., Tsurgeon,C., Vogt,J.L., Walker,M.A.,
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Tissue Procurement: ATCC
                                                            AX133528
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                                                                                                                                                                         AAGACCTGGGGCCAATACTGGCAAGTT
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/clone_tib="WIH_MGC_21"
/lab_host="DH10B-R"
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TTPGQAPTAEPSGTTSVQVETTEVISTAPVQMPTAESTGMTEEKVEVSEVMGTTLAEM
STPEAGMTPAEVSIVVLSGTTAAQVTTTEWWETTARELFIEEEGEDAASINSTESI
TGSLGPLLDGTATLALVKRQVELDCVLYRYGSFSVTLDIVGGIESAEILQAVESGEGD
AFELTVSCQGGLPKEACMEISSPGCQEPAQRLCQPVLPSPACQLVLHQILYGGSGTSCL
LNVSLADTNSLAVVSTQLIMEGQEAGLGQVPLIVGILLVLMAVVLASLIYRRRLMKQD
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VSQLRALDGGNKHFLRNQPLTFFALQLHDPSGYLAEADLSYTNDFGDSSGTLISBALVV
VSQLRALDGGNKHFLRNQPLTFFALQLHDPSGYLAEADLSYTNDFGDSSGTLISBALVV
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2 (bases 1)
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4 (bases 3)
5 (bases 4)
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6 (bases 4
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                         Evaluation; clone selection for full insert sequencing: HRI and RAB, annotation: HRI and RAB.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Ono,Y., Hotuta,T., Hiraoka,S., Murakawa,K., Takiguchi,S.,
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632 c 657 g 623 t
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Sequence 26
AR063067
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AR091800
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1 (bases 1 to 2172)
Kawakami,Y. and Rosenberg,S.A.
Melanoma antigens and their use
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Kawakami, Y. and Rosenberg, S.A.
Melanoma antigens and their use in diagnostic and therapeutic
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26 from patent US 5994523.
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747 c 733 g 6
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AR162997
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Kawakami, Y. and Rosenberg, S.A.
Melangma antigens and their use in diagnostic and therapeutic
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    Kawakami, Y. and Rosenberg, S.A.
    Melanoma antigens and their use in diagnostic and therapeutic

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US 6537560-A 26 25-MAR-2003;
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Patent: EP 1222928-A 1 17-JUL-2002;
Universitaet Zuerich Institut fuer N
Location/Qualifiers
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Mammalia; Eutheria; Rodentia;
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SLALDIVQGIESAEILQAVPFSEGDAFELTVSCOGGLPKEACMDISSPGCQPPAQRLC
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VGILLVLVAVVLASLILGIDLRSRAQFPKCHMVALTAAPASGLRARGLGENSPLLSGQ
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/codon_start=1.
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QVLGGFVSRSSIATRHAKLGTHTMEVTVYHRRGSQSVPLHAHSSTFTITDQVPFSUV
VSQLQALDGETKHFLRHPLIFALQHDFSGYLABADLSYTWDFGDGTTSRQTTKVVG
VSQLQALDGETKHFLANFLIFALGHTMEVTVYHRGSQSVPLAHASSTFTITDQVPFSUV
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mol_type="genomic DNA"
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Search completed: August 24, 2003, 02:53:47 Job time: 2201.5 secs

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Listing first 45 summaries
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123.638 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,

and is derived by analysis of the total score distribution.

SUMMARIES

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expressed	secreted pr	Secreted protein g	Novel human nuclei	Human polynucleoti	DNA #46 encoding h	reproduct	reproducti	Human endocrine po	Genomic sequence #		00		Aspergillus fumiga	G		DNA encoding human	Human polynucleoti	Human polynucleoti	Human cancer relat	`		iv Toc	Bovine EST associa	Human cDNA differe	Sequence encoding	Murine gp100 codin	ncoding Me	MART-1 melanoma an	Human DNA for mela	d C5He	db100 cc	pMEL17 cDNA. Homo		cDNA encoding huma				Modified gp100M en	-	ied t	DNA	DNA	שי	equence encodin	Description		

ALIGNMENTS

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Key CDS	Homo sapiens.	identification;	Melanoma; antige	Sequence encodin		25-JAN-1996 (first entry)		AAT05466;		AAT05466 standar	AAT05466	RESULT 1
Location/Qualifiers		identification; tumour; gp100; ss.	Melanoma; antigen; vaccine; immunogen; primer; probe; detection;	Sequence encoding immunogenic peptide of melanoma antigen gpl00.		rst entry)				AAT05466 standard; cDNA to mRNA; 36 BP.		

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RESULT 2
AAL2695 / AAL269 / AAL269 / AAL269 / AAL269 XX
AC AAL269 XX
DT 24-JAN
XX
DE Human
XX
Immuno
KW Immuno
KW Immuno
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Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                               Alignment
        Immunosuppressive; immunostimulatory; antiinflammatory; cytostatic; neuroprotective; antimicrobial; gene therapy; vaccine; amylase; can amyloid protein; angiopoietin; apotosis related protein; cadherin; cyclin; polymerase; oncogene; histone; kinase; colony stimulating f; complement related protein; cytochrome; kinesin; cytokine; interfer interleukin; G-protein coupled receptor; thioesterase; inflammation
                                                                                            Human SNP oligonucleotide #164.
                                                                                                                                                                    AAL26956 standard;
                                                                                                                                                                                                                                                                                                                                                                                       Sequence 36 BP; 9 A; 8 C;
                                                                                                                                                                                                                                                                                                                                                                                                                      Immunogenic peptides derived from the melanoma associated antigen (See AR78639-45) may be used in the production of vaccines. Nucleotide sequences encoding the immunogenic peptides may be used as primers and probes in the detection of melanoma cells. Tumour infiltrating lymphocytes capable of binding to the melanoma associated antigen can be cultured ex vivo and returned to melanoma particles, and when radiolabelled, they may be used to identify
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 7; Page 27; 40pp; English.
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16-FEB-1994;
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94EP-0200337.
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                      interferon;
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                                                         cancer;
                                 factor;
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RESULT 3 ABK36650

ABK36650 standard; DNA;

90

ВP

DNA

encoding

gp100 segment

08-MAY-2002

(first entry)

ABK36650;

Savine; vaccine; cancer; viral infection; HIV; viral infection; human immunodeficieny virus; m bacterial infection; Salmonella; pa Trypanosoma; Toxoplasma; Giardia; ds.

V; hepatitis C virus;
; melanoma;
parasitic infection;

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Percent Similarity:
Best Local Similarity:
Query Match:
DB:
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                                                           US-09-214-836-1 (1-9)
                                                                                                                                                                                                                                                                                                      The present invention relates to oligonucleotides encoding polymorphic variants of proteins related to amylases, amyloid proteins, angiopoietin, apoptosis related proteins, cadherin, cyclin, polymerase, oncogenes, histones, kinases, colony stimulating factors, complement related proteins, cytochromes, kinesins, cytokines, interferons, interleukins, c-protein coupled receptors and thioesterases. The present sequence is one such oligonucleotide. The oligonucleotides and the peptides encoded by them may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate expression of the proteins listed above. Disorders that may be prevented, diagnosed and/or treated include multifactorial diseases with a genetic component, such as autoimmune diseases (e.g. rheumatoid arthritis, multiple sclerosis, diabetes,
                                                                                                                                                                                                                                                           systemic lupus erythromatosus and Grave's disease), inflammation, cancer (e.g. cancers of the bladder, brain, breast, colon and kidney, leukaemia), diseases of the nervous system and an infection of pathogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Polymorphic nucleic acids encoding e.g. amylases, cyclins, polymerases, oncogenes and histones, useful for diagnosing and treating, e.g. cancer, autoimmune diseases and infections -
                                                                                                                                                                       NO.:
                                                                                                                                                                                                                 Sequence 51
                                                                                                                                                                                                                                               organisms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-465210/50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shimkets RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-DEC-1999; 99US-0173419.
27-DEC-2000; 2000US-0173419.
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                                                                                                                                                                                    Scores:
 37
                         LysThrTrpGlyGlnTyrTrpAlaVal
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                                                                                                                                                                                                                  BP;
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RESULT 4
ABK36651
ID ABK3
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Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                          CC parent polypeptide to impede, abrogate or otherwise alter at least one CC function associated with the parent polypeptide and for inducing an CC immune response against a pathogen or cancer. Also included are a CC synthetic polynucleotide encoding and a computer system for CC synthetic polynucleotide encoding and a computer system for CC polynucleotides are referred to as a Savine. The synthetic polypeptide is CC useful for modulating immune responses preferably directed against a CC pathogen or a cancer, (e.g., cancers of the lung, breast, ovary, cervix, CC colon, head and neck, pancreas, prostate, stomach, bladder, kidney, bone CC pathogen or a cancer, the spring synthetic polypeptide is CC compositions comprising the polypeptide may be used in the treatment or CC prophylaxis against viral (such as infections caused by HIV (human CC virus, Epstein-Barr virus and respiratory syncytial virus), bacterial CC (e.g., infections caused by Neisseria, Meningococcal, Haemophilus, CC Salmonella, Streptococcal, Legionella and Mycobacterium or parasitic CC (e.g., infections caused by Plasmodium, Schistosoma, Leishmania, CC Trypanosoma, Toxoplasma and Giardia) infections. The present
                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a new synthetic polypeptide (I) comprising several different segments of at least one parent polypeptide linked together in a different relationship relative to their linkage in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New synthetic polypeptides having several different segments of at least one parent polypeptide linked together differently compared to the linkage in the parent polypeptide, for inducing immune response against a pathogen or cancer
                  08-MAY-2002
                                                 ABK36651;
                                                                               ABK36651 standard;
                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                sequence encodes a peptide derived from a parent protein construct a savine of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thomson
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                 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                           synthetic polynucleotide encoding and a computer system for designing the synthetic polypeptides. The synthetic polypeptides and polynucleotides are referred to as a Savine. The synthetic polypeptide is useful for modulating immune responses preferably directed against a pathogen or a cancer, (e.g., cancers of the lung, breast, ovary, cervix, colon, head and neck, pancreas, prostate, stomach, bladder, kidney, bone liver, oesophagus, brain, testicle, uterus), as potentiating agents. Compositions comprising the polypeptide may be used in the treatment or prophylaxis against viral (such as infections caused by HIV (human immunodeficiency virus), hepatitis, influenza, Japanese encephalitis virus, Epstein-Barr virus and respiratory syncytial virus), bacterial (e.g., infections caused by Naieseria Moranococcal useroschilleria)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a new synthetic polypeptide (I) comprising several different segments of at least one parent polypeptide linked together in a different relationship relative to their linkage in the parent polypeptide to impede, abrogate or otherwise alter at least one function associated with the parent polypeptide and for inducing an immune response against a pathogen or cancer. Also included are a
                                                                                                                                                                                                                                                                                                                            (e.g., infections caused by Neisseria, Meningococcal, Haemophilus, Salmonella, Streptococcal, Legionella and Mycobacterium or parasit (e.g., infections caused by Plasmodium, Schistosoma, Leishmania, Trypanosoma, Toxoplasma and Giardia) infections. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New synthetic polypeptides having several different segments of at least one parent polypeptide linked together differently compared the linkage in the parent polypeptide, for inducing immune respons against a pathogen or cancer -
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                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                      Sequence 90
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bacterial infection; Salmonella; Legionella; parasitic infection.
Trypanosoma; Toxoplasma; Giardia; ds.
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                          LysThrTrpGlyGlnTyrTrpAlaVal 9
AAAACCTGGGGCCAATACTGGCAGGTC
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                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                      The invention relates to a method of enhancing an immune response against tumour-associated antigens (TAAs), such as GP100 and carcinoembryonic antigen (CEA) in an animal. The method involves priming of the animal with an inducing agent such as tetanus toxoid (TT) or diphtheria toxoid (DT), subsequently followed by administration of an inducing agent-antigen mixture. The method provides the enhancement or augmentation of the immune response to the antigen and/or improves a vaccination protocol by allowing use of less antigen. The immunisation of the animal with tumour-associated antigen is useful for the prophylactic or therapeutic treatment of cancer. The present DNA sequence encodes modified tumour-associated antigen, GP100 related to the invention.
           AAH22098;
                                      AAH22098 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Enhancing immune response to antigen such as tumor antigen for treating cancer in an animal involves administering an inducing agent to the animal followed by administering inducing agent-antigen mixture -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-SEP-2001
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                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             molecule (gp100M) capable of modulating an immune response in an animal gp100M has cytostatic activity and can be used in vaccine production and gene therapy. Nucleic acids and proteins of the invention are useful as vaccines for prophylactic treatment of cancer. AAH22004 to AAH322106 and AAB98098 to AAB98206 represent sequence used in the exemplification of the present invention. More specifically AAB98098 to AAB98205 represent peptides derived from gp100; AAH22084 to AAH22097 and AAH22100 to AAH22106 represent primers used in the present invention; AAH22099 represents the plasmid nucleotide sequence comprising the Vaccinia virus H6 promoter and the human gp100 gene; and AAH22098 encodes the human gp100 m protein given in AAB22106.
Virus; adenovirus; poxvirus; alphavirus; immune response; gp100; tumour antigen; CEA; carcinoembryonic antigen; immunostimulant; cytostatic; immunotherapy; interferon-gamma; IFN-gamma; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; gp100; immune system; H6 promoter; Vaccinia virus; gp100M; modified gp100; vaccine: dene therapy.
                                                           Modified gp100M encoding cDNA sequence SEQ ID NO:109.
                                                                                             08-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 2; Fig 1; 89pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-OCT-1999; 99US-0160879.
07-AUG-2000; 2000US-0223325.
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                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes a method for inducing an immune response, CC in an animal, to a tumour antigen (Ag) comprising administering Ag, or cc nucleic acid (I) that encodes it, to a lymphatic site. Cynomolgus monkeys CC (Macaca fascicularis) were injected with a modified form of gp100 antigen CC (a) into the left inguinal lymph node or (b) subcutaneously. Both animals CC of (a) developed a cell-mediated response (indicated by production of cc interferon-gamma from T lymphocytes when exposed to gp100 peptides), but CC only 2 of 4 animals of (b) did so. Also animals in (a) produced a far CC greater antibody response to gp100. The method is used in immunotherapy CC of a wide range of cancers through induction of a specific immune CC response (humoral and cellular) against the tumour antigens. When CC administered to a lymphatic site, Ag (or (I)) induces a stronger immune CC administered to a lymphatic site, Ag (or (I)) induces a stronger immune CC administered to a lymphatic site, Ag (or (I)) induces a stronger immune CC ABB97815 represent peptides derived from gp100 which stimulate interferon CC (IFN)-gamma production; AAH20120 encodes the modified carcinoembryonic antigen (CEA) protein given in AAB97817; and AAB97818 represents a CEA modified antigen CC invention
                                                                                                                                                       RESULT
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Melanoma; antigen; vaccine; immunogen; primer; probe; detection;
                               Sequence encoding melanoma associated antigen gp100.
                                                               22-JAN-1996
                                                                                            AAQ96055;
                                                                                                                         AAQ96055 standard; cDNA to
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07-AUG-2000;
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No.:
                                                                                                                                                                                                              cultured ex vivo and returned to melanoma particles, and who radiolabelled, they may be used to identify tumour deposits
                                                                                                                                                                                                                                   encoding the immunogenic peptides may be used as primers and probes in the detection of melanoma cells. Tumour infiltrating lymphocytes capable of binding to the melanoma associated antigen can be
                                                                                                                                                                                                                                                                  Immunogenic peptides derived from the melanoma associated antigen may be used in the production of vaccines. Nucleotide accounts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                          Sequence 2115
                                                                                                                                                                                                                                                                                                   Claim 2; Page 19-22; 40pp; English.
                                                                                                                                                                                                                                                                                                                         Melanoma associated antigen gp100 detection of tumours
                                                                                                                                                                                                                                                                                                                                                          P-PSDB; AAR78646.
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16-FEB-1994;
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                                          AAGACCTGGGGCCAATACTGGCAAGTT 507
                                                       LysThrTrpGlyGlnTyrTrpAlaVal
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94EP-0200337.
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/*tag= f
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/label= Transmembrane domain
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ABQ76195 standard; DNA; 2130

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                                                                                                                RESULT 10
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                                                                                                                                                                                                                                       Query Match:
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                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                            This invention describes a novel mechanism or its fragment. The method response in a patient to a target protein or its fragment. The method involves introducing a vector containing a nucleotide sequence encoding a chimeric immunogen comprising a protein processing signal and the target protein or its fragment. The immunogen is produced by the cells and processed so that the target protein or its fragment is presented to the patients immune system and a cellular immune response is initiated. The method and vectors can be used as a form of vaccination and could be used to generate a cellular immune response is the predominant immune response in the patients. This sequence represents a DNA fragment which response in the patient. This sequence represents a DNA fragment which
        Human melanoma antigen gp100 coding sequence.
                                    13-DEC-2001
                                                              AAH43500;
                                                                                       AAH43500
                                                                                                                                                                                                                                                                                                                                   Sequence 2130 BP;
                                                                                                                                                                                                                                                                                                                                                         invention.

Note: The information in this spec has kw0199845444 however this spec contained
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Generating cellular immune response in patient to target protein - comprises introducing vector with nucleotide sequence encoding immunogen comprising protein processing signal into cell of patient
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-APR-1997;
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                                                                                       standard;
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d no sequence
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                                                                                                                                                                                                                                                                                                                                                                       previously disclosed
                                                                                                                                                                                                                                                                                                                                   0 other;
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RESULT 11
AAS14396
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence encodes human melanoma antigen gp100. Peptides of the invention based on the sequence of residues 299-217 of human melanoma antigen gp100, which represents the putative HLA-A2 binding domain, are designed to enhance binding to major histocompatibility complex (MHC) molecules and to enhance immunoregulatory properties relative to their natural counterparts. The mutations in the claimed peptides confer tighter binding to the MHC. These peptides are useful for inducing an immune response in a subject, where they are delivered in the context of an MHC molecule which presents the compound on the surface of an antigen presenting cell. The peptide sequences are useful as components of anti-cancer vaccines and to expand immune effector cells that are specific for cancers characterized by expression of the melanoma antigen gp100. They are useful for diagnosts and treatment of diseases such as cancer, in particular against human melanoma and for antigen gratical and treatment of antigen presents in confident that and the context in particular against human melanoma and for the context of the context in particular against human melanoma and for the context in the contex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel synthetic compounds useful for stimulating an immune respons a subject and as components of anti-cancer vaccines, are designed enhance binding to major histocompatibility complex molecules -
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AAS14396;
                                             AAS14396 standard; cDNA; 2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2130 BP; 484 A; 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        generating antibodies that specifically recognize and bind
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12-DEC-2000;
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2000US-255019P.
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22..2007
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26-MAR-2002

(first entry)

cDNA encoding human melanoma antigen gp100

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RESULT 12
AAT03760
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                                                                                                       US-09-214-836-1 (1-9)
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Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                 polynucleotides that encode these compounds, and immune effector cells that have been raised in vitro or in vivo in the presence of an antigen presenting cell (APC) that presents the compound. Such an APC may be the major histocompatibility complex (MHC) molecule. The anti-melanoma compounds are useful for inducing an immune response in a subject, by delivering the compound to the subject in the context of an MHC molecule which presents the compound on the surface of an APC. The anti-melanoma compound is delivered as a polynucleotide that encodes it. The compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel anti-melanoma compound or peptide useful for inducing immune response in a subject, for treating melanoma, as components of anti-cancer vaccines and to expand immune effector cells specific for
                                                                                                                                                                                                                                                                                      cancers characterised by expression of gp100 tumour antigen, The compounds are also useful in diagnostic methods for such The present sequence encodes human melanoma antigen gp100.
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P-PSDB; AAU09695.
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09-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             immune effector cell; antigen presenting cell; anti-cancer;
major histocompatibility complex; gp100 tumour antigen; cytostatic;
                                                                                                                                                                                                                   No.:
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                                                                                                                                                                                                                                                                                                                                     e useful to generate antibodies that specifically recognise and bind them, for the treatment of melanoma, as components of anti-cancer coines, and to expand immune effector cells that are specific for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tide sequence based on human melanoma antigen gp100. Al antibodies that recognise and bind to these compounds,
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effector cell; antigen presenting cell; anti-cancer;
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                                                                LysThrTrpGlyGlnTyrTrpAlaVal 9
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2001US-267877P.
                                           CTGGGGCCAATACTGGCAAGTT
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/*tag= a
                                                                                                       x AAS14396
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          relates to anti-melanoma compounds comprising a d on human melanoma antigen gp100. Also described
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                                                                                                       (1-2130)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          English
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                                                        PMEL17
                                                                               08-APR-1998
                                                                                                                                                                                                                                                                                                                                                Sequence 2131
        Melanoma; immunogen; cytotoxic T lymphocyte; CTL;
human leukocyte antigen-A1; HLA-A1; human leukocyte antigen-A3;
HLA-A3; epitope; pMEL-17; tyrosinase; vaccine; protection; ss.
                                                                                                       AAT96726
                                                                                                                              AAT96726 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Melanoma-specific immunogen comprises epitope(s) homologous with pMel.17 - are highly potent stimulators of HLA-A2+CTL's useful in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Melanoma; immunogen; epitope; homologue; vaccine; immunotherapy; cytotoxic T cell; lymphocyte; HLA-A2; ss.
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                                                                                                                                                                                                                                                                                                                                                                      incorporated into immunogenic conjugates as vaccines.
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94US-0197399.
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                                                                                                                                                                                                                                                                                                                                                                                                     Pred
                                                                                                                                                                                                                                                                  RESULT 14
                                                                                                                                                                                                                                                                                                                              US-09-214-836-1 (1-9) x AAT96726 (1-2131)
                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                      AAL49164
                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     A novel melanoma specific immunogen comprises at least 1 melanoma specific cytotoxic T lymphocyte (CTL) epitope, where at least 1 of the epitopes is substantially homologous to a human leukocyte antigen-A1 (HLA-A1) and HLA-A3 restricted epitope of a melanoma antigen, either pMEL-17, i.e. the protein encoded by present sequence, or tyrosinase. The immunogen can be used in vaccines for protection against melanoma in mammals.
              09-JAN-2002; 2002EP-0000185
                                                       EP1222928-A2
                                                                                                CDS
                                                                                                                               Homo
                                                                                                                                                               Human;
                                                                                                                                                                                                     29-OCT-2002
                                                                                                                                                                                                                         AAL49164;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 2131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Pages 30-31; 106pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Melanoma-specific immunogens of pMel-17 vaccination for producing melanoma-speci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1997-479982/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cox AL, Engelhard VH, Shabanowitz J, Skipper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-OCT-1996;
19-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-SEP-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9734613-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                   17-JUL-2002.
                                                                                                                                                  cytostatic; gene;
                                                                                                                                                                                 Human gp100 coding sequence
                                                                                                                                                                                                                                            AAL49164 standard;
                                                                                                                                                                                                                                                                                                                                                                                                   No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYVI-) UNIV VIRGINIA PATENT FOUND
                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                       471
                                                                                                                                                            gp100; cancer; vaccine; melanoma; tumour-associated antigen;
                                                                                                                                                                                                                                                                                                  LysThrTrpGlyGlnTyrTrpAlaVal 9
                                                                                                                                                                                                                                                                                       AAGACCTGGGGCCAATACTGGCAAGTT
                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                  BP; 475 A; 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96US-0027627.
96US-0013972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97WO-US04958
                                                                                               Location/Qualifiers
                                                                          'product= "gp100"
                                                                                                                                                   88
                                                                                                                                                                                                                                                                                                                                                 29.2
53.00
88.89%
88.89%
91.38%
                                                                                                                                                                                                                                            CDNA; 2131 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hendrikson RC, H
J, Slingluff CL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ens of pMel-17 and melanoma-specific
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                  578 G;
                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
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Indels:
                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                       497
                                                                                                                                                                                                                                                                                                                                                                                                                                  490 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hunt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tyrosinase - useful in cytotoxic T lymphocytes
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                                                                                                                                                                                                                                                                                                                                                                                                                                  0 other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                leukocyte
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RESULT 15
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Best Local Similarity:
Query Match:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to a pharmaceutical computation comprises a nucleic acid molecule encoding a tumour-associated antigen and at least one peptide comprising a region corresponding to a putative cytotoxic T cell, helper T cell or B cell epitope of a tumour-associated antigen and/or cells pulsed with such peptide(s). In particular, the tumour-associated antigen may be gp100. The composition is useful for the treatment of cancer, especially melanoma. The present sequence is the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pharmaceutical composition useful for treating cancer, comprises nucleic acid molecule encoding tumor associated antigen and peptide comprising a region corresponding to epitope of tumor associated antigen -
                                                                                          22-OCT-1999;
07-AUG-2000;
                                                                                                                                                       03-MAY-2001.
                                                                                                                                                                                                                                     Human; gp100; modified gp100
                                                                                                                                                                                                                                                                        Plasmid C5H6gp100M H6 promoted human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 21-24; 34pp; English.
                    WPI; 2001-316326/33.
                                            Berinstein N,
                                                                                                                               20-OCT-2000; 2000WO-CA01254.
                                                                                                                                                                            WO200130847-A1
                                                                                                                                                                                                    Vaccinia virus
                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                17-AUG-2001
                                                                                                                                                                                                                                                                                                                        AAH22099;
                                                                                                                                                                                                                                                                                                                                              AAH22099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-610269/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-JAN-2001; 2001EP-0100914.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYZU-) UNIV
                                                                   (AVET ) AVENTIS PASTEUR LTD.
                                                                                                                                                                                                                                                                                                                                                                                            471
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                                                                                                                                                                                                                                    gp100;
                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                          LysThrTrpGlyGlnTyrTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2131 BP;
                                                                                                                                                                                                                                                                                                                                                                                             AAGACCTGGGGCCAATACTGGCAAGTT
                                                                                          99US-0160879.
2000US-0223325.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZUERICH INST MEDIZINISCHE VIROLOGIE.
                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nawrath M,
                                                                                                                                                                                                                                                immune system; H6 promoter; Vaccinia virus;
                                            Tartaglia J,
                                                                                                                                                                                                                                     vaccine; gene
                                                                                                                                                                                                                                                                                                                                                                                                                                         x AAL49164 (1-2131)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             475 A; 588 C;
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53.00
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                                                                                                                                                                                                                                                                                                                                              DNA;
                                                                                                                                                                                                                                                                                                                                               2534 BP
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                                            Moingeon
                                                                                                                                                                                                                                     therapy; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             578 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
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                                                                                                                                                                                                                                                                         gp100M nucleotide sequence.
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                                             Barber
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0 other;
                                                                                                                                                                                                                                       circular;
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                                             Tine JA;
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New isolated and purified gp100 useful for the prophylactic treatment

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RESULT 16
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention describes an isolated and purified modified gp100 molecule (gp100M) capable of modulating an immune response in an animal. gp100M has cytostatic activity and can be used in vaccine production and gene therapy. Nucleic acids and proteins of the invention are useful as vaccines for prophylactic treatment of cancer. AAH22084 to AAH322106 and AAH38808 represent sequence used in the exemplification of the present invention. More specifically AAH38098 to AAH38215 represent peptides derived from gp100; AAH22084 to AAH22097 and AAH22100 to AAH22100 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human DNA for melanocyte differentiation antigens savine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.:
                      Example 3; Fig 27; 364pp; English
                                                                      New synthetic polypeptides having several different segments of at least one parent polypeptide linked together differently compared to the linkage in the parent polypeptide, for inducing immune response against a pathogen or cancer -
                                                                                                                                                                                                                    WPI; 2002-147575/19.
                                                                                                                                                                                                                                                                     Thomson
                                                                                                                                                                                                                                                                                                                                                                26-MAY-2000; 2000AU-0007761.
                                                                                                                                                                                                                                                                                                                                                                                                           25-MAY-2001; 2001WO-AU00622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200190197-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Trypanosoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         viral infection; human immunodeficieny virus; melanoma; bacterial infection; Salmonella; Legionella; parasitic infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        viral infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Savine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABK36828;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABK36828 standard; DNA; 16638 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2534 BP; 622 A; 632 C; 657 G; 623 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gp100M protein given in AAB22106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 2; Fig 3; 89pp; English
                                                                                                                                                                                                                                                                                                                     (AUSU )
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                                                                                                                                                                                                                                                                                                                     VIND
                                                                                                                                                                                                                                                                     SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vaccine;
                                                                                                                                                                                              AAU85008.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LysThrTrpGlyGlnTyrTrpAlaVal 9
                                                                                                                                                                                                                                                                                                                     AUSTRALIAN NAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                     Ramshaw IA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Toxoplasma; Giardia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancer; viral infection; HIV; hepatitis C virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35.4
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Matches:
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RESULT 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               virus, Epstein-Barr virus and respiratory syncytial virus), bacterial (e.g., infections caused by Neisseria, Meningococcal, Haemophilus, Salmonella, Streptococcal, Legionella and Mycobacterium or parasitic (e.g., infections caused by Plasmodium, Schistosoma, Leishmania, Trypanosoma, Toxoplasma and Giardia) infections. The present sequence encodes a savine protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   colon, head and neck, pandreas, prostate, stomach, bladder, kidney, bone liver, oesophagus, brain, testicle, uterus), as potentiating agents. Compositions comprising the polypeptide may be used in the treatment or prophylaxis against viral (such as infections caused by HIV (human immunodeficiency virus), hepatitis, influenza, Japanese encephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immune response against a pathogen or cancer. Also included are a synthetic polynucleotide encoding and a computer system for designing the synthetic polypeptides. The synthetic polypeptides and polynucleotides are referred to as a Savine. The synthetic polypeptide is useful for modulating immune responses preferably directed against a pathogen or a cancer, (e.g., cancers of the lung, breast, overy, cervix, pathogen or a cancer, (e.g., cancers of the lung, breast, overy, cervix, pathogen or a cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a new synthetic polypeptide (I) comprising several different segments of at least one parent polypeptide linked together in a different relationship relative to their linkage in the
                                                                    05-APR-1995;
22-APR-1994;
                                                                                                                                                                                                                                                                                                                             Mammalian
                                                                                                                                                                                                                                                                                                                                                            prophylaxis; therapy; vaccine; ds.
                                                                                                                                                                                                                                                                                                                                                                               fumour-associated antigen; immunogen; diagnosis; prognosis;
                                                                                                                                                                                                                                                                                                                                                                                              cDNA25; MART-1; melanoma antigen recognised by T-cells; gp100 antigen derivative; melanoma; metastatic melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                     MART-1 melanoma antigen cDNA25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAT02716;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT02716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 16638 BP; 3840 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                parent polypeptide to impede, abrogate or otherwise alter at least one function associated with the parent polypeptide and for inducing an
                                (USSH ) US
                                                                                                                         21-APR-1995;
                                                                                                                                                           02-NOV-1995
                                                                                                                                                                                               WO9529193-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 LysThrTrpGlyGlnTyrTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; cDNA; 2172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAACCTGGGGCCAATACTGGCAGGTC 7278
                                  SEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                  DEPT HEALTH
                                                                  95US-0417174.
94US-0231565.
                                                                                                                         95WO-US05063.
                                                                                                                                                                                                                                                                     38..2038
                                                                                                                                                                                                                                 /note= "cDNA25 melanoma antigen"
                                                                                                                                                                                                                                                                                        ocation/Qualifiers
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53.00
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91.38%
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Matches:
Conservative:
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                                                                                                                                                                                                                                                                                                                                                                                                  melanoma;
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Kawakami Y,

Rosenberg SA;

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Query
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AAS45525
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Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 199
                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The nucleic acid encodes cDNA25, a melanoma antigen (MART-1) which is recognized by T-lymphocytes. cDNA25 is a derivative of the melanocyte-melanoma-specific antigen gp100 (see AAR94855). Antigen cDNA25 is a source of immunogenic peptides (see AAR94199) which are optionally modified (see AAR84200-R84211) and used in medicaments, especially vaccines, for the treatment or prevention
              Immunogenic peptide useful in vaccines comprises specific amino of new melanoma antigen recognised by T lymphocytes -
                                                  P-PSDB;
                                                                                   Kawakami
                                                                                                                                05-APR-1995;
                                                                                                                                                       05-MAY-1998;
                                                                                                                                                                                                  07-AUG-2001
                                                                                                                                                                                                                         US6270778-B1
                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                     in vivo tumour
                                                                                                                                                                                                                                                                                          Human; MART-I; immunogenic; melanoma antigen recognised by T lymphocyte;
                                                                                                                                                                                                                                                                                                                                        18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                AAS45525
                                                                                                                                                                                                                                                                                                                                                                                     AAS45525 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (by immunization) of melanoma. Antibodies against cDNA25 and its immunogenic peptides may be used in the detection and isolation of the antigen from a sample, the detection of which is indicative of a disease state (melanoma or metastatic melanoma).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Fig 4A-4B; 184pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vectors,
                                                                                                                                          22-APR-1994;
                                                                                                                                                                             12-MAR-1999;
                                                                                                          (USSH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Хо
...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoding melanoma antigens recognised by T-lymphocytes - tors, host cells and antibodies, used to detect, treat and unise animal against melanoma.
                                                                                                                                                                                                                                                                                                                encoding Melanoma
                                                            2001-595403/67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1995-382963/49.
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                                                  AAU28912.
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                                                                                                         DEPT HEALTH & HUMAN
                                                                                                                                                                                                                                                                                therapeutic; vaccine; melanoma;
                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP;
                                                                                                                              98US-0073138.
94US-0231565.
95US-0417174.
                                                                                                                                                                             99US-0267439.
                                                                                                                                                                                                                                                                     rejection;
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                                                                                                                                                                                                                                                                                                                 antigen
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                                                                                                                                                                                                                                                                                                                 cDNA25
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                                                                                                          SERVICES.
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Conservative:
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RESULT 19
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&XSSSSSSSSXX
The present invention relates to a pharmaceutical composition which comprises a nucleic acid molecule encoding a tumour-associated antigen and at least one peptide comprising a region corresponding to a putatic cytotoxic T cell, helper T cell or B cell epitope of a tumour-associate
                                                                                                Pharmaceutical composition useful for treating cancer, comprises nucleic acid molecule encoding tumor associated antigen and peptide comprising a region corresponding to epitope of tumor associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       melanoma, and for in vivo tumour recognition and rejection. AAS45524 AAS45528 represent MART-1 coding sequences, PCR primers, and related sequences of the invention.
                                                                                          comprising a antigen -
                                                                                                                                                      WPI; 2002-610269/66.
P-PSDB; AAO18862.
                                                                                                                                                                                                                                          16-JAN-2001;
                                                                                                                                                                                                                                                                    09-JAN-2002;
                                                                                                                                                                                                                                                                                                                     EP1222928-A2.
                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                    cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Murine gp100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAL49163;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contiguous amino acids of new melanoma antigen recognised by T
lymphocytes (MART-1). The peptide sequence contains at least one an
acid modification of MART-1. The peptide is used in diagnostic and
therapeutic methods as an immunogen or vaccine to prevent or treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 3; Figure 4; 73pp;
                                                               Disclosure;
                                                                                                                                                                                        Moelling
                                                                                                                                                                                                                                                                                             17-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                              Mouse; gp100;
                                                                                                                                                                                                                  (UYZU-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               invention relates to a novel immunogenic peptide comprising iguous amino acids of new melanoma antigen recognised by T
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGACCTGGGGCCAATACTGG 518
                                                                                                                                                                                                                                                                                                                                                                                                                                    gene;
                                                               Page 16-19; 34pp; English.
                                                                                                                                                                                                                                             2001EP-0100914.
                                                                                                                                                                                                                                                                    2002EP-0000185.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coding sequence.
                                                                                                                                                                                                                   ZUERICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP; 512 A; 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancer;
                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
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                                                                                                                                                                                                                   INST MEDIZINISCHE VIROLOGIE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 vaccine; melanoma; tumour-associated
                                                                                                                                                                                            Pavlovic J;
                                                                                                                                                                                                                                                                                                                                             "gp100"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
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Matches:
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RESULT 20
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Best Local Similarity:
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                            Nucleotide sequences encoding the immunogenic peptides may be used as primers and probes in the detection of melanoma cells. Tumour infiltrating lymphocytes capable of binding to the melanoma associated antigen can be cultured ex vivo and returned to melanoma particles, and when radiolabelled, they may be used to identify
                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                           Homo
Sequence
                    tumour deposits.
                                                                                                               Claim 7; Page 26; 40pp; English.
                                                                                                                                    detection
                                                                                                                                             Melanoma associated antigen
                                                                                                                                                                             WPI; 1995-284790/38.
                                                                                                                                                                                                   Adema
                                                                                                                                                                                                                     (ALKU ) AKZO NOBEL NV
                                                                                                                                                                                                                                           16-FEB-1994;
                                                                                                                                                                                                                                                     21-DEC-1994;
                                                                                                                                                                                                                                                                          14-FEB-1995;
                                                                                                                                                                                                                                                                                               23-AUG-1995
                                                                                                                                                                                                                                                                                                                  EP668350-A1
                                                                                                                                                                                                                                                                                                                                                                                                                identification;
                                                                                                                                                                                                                                                                                                                                                                                                                         Melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence encoding
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT05465;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAT05465 standard; cDNA to mRNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1881 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antigen and/or cells pulsed with such peptide(s). In particular, the tumour-associated antigen may be gpl00. The composition is useful for treatment of cancer, especially melanoma. The present sequence is the murine gpl00 coding sequence.
                                                                              Immunogenic peptides derived from the melanoma associated antigen (See AAR78639-45) may be used in the production of vaccines.
                                                                                                                                                                                                                                                                                                                                                                                           sapiens
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24 BP; 6
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                                                                                                                                                                                                                                                                                                                                                                                                                         antigen; vaccine;
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                                                                                                                                    tumours
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                                                                                                                                                                                                                                          94EP-0203709.
94EP-0200337.
                                                                                                                                                                                                                                                                          95EP-0200348
                                                                                                                                                                                                                                                                                                                                                                                                             tumour; gp100;
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RESULT 21
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          The invention relates to detecting (M1) granulocyte (GC) activation (GCA), by detecting the level of expression of gene(s) (GS) identified by (GCA), by detecting the level of expression (gene(s)) (GS) identified by DNA chip analysis as given in the specification, and comparing the expression level in an unactivated (GC) where differential expression of GS is indicative of GCA. Also included are modulating (M2) GA by contacting GC with an agent that alters the expression of at least one gene in Gs; (2) screening (M3) (For an agent capable of modulating GCA or an inflammation (especially componic) in a tissue, an allergic response in a subject, exposure of a subject to a pathogen or sterile inflammatory disease using the Gene expression profile; (3) detecting (M4) an inflammation (especially chronic) in a tissue, an allergic response in a subject, exposure of a subject to a pathogen or sterile inflammatory disease, by detecting the complex of expression in a sample of the tissue of gene(s) from GS, where the level of expression of the gene is indicative of inflammation; (A) treating (M5) an inflammation (especially chronic) or in a tissue, an allergic response in sindicative of inflammation; (A) treating (M5) an inflammation (especially chronic) or in a tissue, an allergic response is indicative of inflammation; (A) treating (M5) an inflammation (especially chronic) or in a tissue, an allergic response is indicative of an athogen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rheumatoid arthritis; glomerulonephritis; asthma; thrombosis; cardiac reperfusion injury; renal reperfusion injury; ARDS; adult respiratory distress syndrome; inflammatory bowel disea Crohn's disease; ulcerative colitis; periodontal disease; granulocyte activation; chronic inflammation; allergy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity:
                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID No 68; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                              Detecting granulocyte activation by detecting differential expression of genes associated with granulocyte activation, which serves as diagnostic markers that is useful for monitoring disease states and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2002-435328/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Beazer-Barclay Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-OCT-2000; 2000US-237189P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-OCT-2001; 2001WO-US30821
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              viral infection; parasitic infection; pungal infection; sterile inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human cDNA differentially expressed in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABK83497;
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                                                                                                                                                                                                                                                                                                                                                                                              toxicity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     granulocytic cell; DNA chip; bacterial infection;
  response
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protozoal infection;
y disease; psoriasis;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vockley
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pathogen
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(M3)

λq

Claim 2;

SEQ ID No 10302; 245pp; English.

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RESULT 22
ABX45137
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            response in a subject, exposure of a subject to a pathogen or sterile inflammatory disease (e.g. psoriasis, rheumatoid arthritis, glomerulonephritis, asthma, thrombosis, cardiac reperfusion.injury, renal reperfusion injury, ARDS, adult respiratory distress syndrome, inflammatory bowel disease, Crohn's disease, ulcerative colitis, periodontal disease; also bacterial infection, viral infection, parasitic infection, protozoal infection, fungal infection and M5 is useful for treating one of the above conditions. The present sequence represents a gene differentially expressed in granulocytes. Note: The sequence data for this patent did not form part
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or sterile inflammatory disease, by contacting a tissue having inflammation with an agent that modulates the expression of gene(s) from 6s in the tissue. MI is useful for detecting GCA, M2 is useful for modulating GA; M3 is useful for screening an agent capable of modulating GCA preferably in an inflammation in a tissue; M4 is useful for detecting an inflammation (especially chronic) in a tissue, an allergic
    New nucleic acid associated with lactation, and muscle and fat deposition, useful for genome mapping, gene identification and analysis, cattle breeding, or for genetically improving cattle
                                                                      WPI; 2003-110599/10
                                                                                                     Byatt
                                                                                                                                                                                                                                                             24-SEP-2001; 2001US-0960352
                                                                                                                                                                                                                                                                                              26-SEP-2002
                                                                                                                                                                                                                                                                                                                           US2002137139-A1.
                                                                                                                                                                                                                                                                                                                                                            Bos Taurus
                                                                                                                                                                                                                                                                                                                                                                                         gene analysis;
                                                                                                                                                                                                                                                                                                                                                                                                          muscle deposition;
                                                                                                                                                                                                                                                                                                                                                                                                                       Bovine; ss; EST; expressed sequence tag; lactation; LMFD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bovine EST associated with
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                                                                                                                                                                 (BYAT/)
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11-JAN-2000; 2000US-0480902
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                                                                                                                                      (WARR/)
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                                                                                                                                                                                   BYATT J C.
                                                                                                                                      WARREN W C.
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                                                                                                                                                                     MATHIALAGAN
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                                                                                                     Mathialagan N,
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100.00%
82.76%
24
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                                                                                                                                                                                                                                                                                                                                                                                                     fat deposition; genome mapping; gene identification;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      lactation/muscle/fat deposition #10302
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Indels:
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Matches:
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                                                                                                       Warren
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CC transcription and addition of polyadenylated ribonucleotides to a 3' end CC of the mRNA molecule; and (2) determining a level or pattern of a CC molecule in a bovine cell or tissue comprising: (a) incubating a marker CC nucleic acid (comprising any of the 15112 nucleic acid sequences or its CC complement or fragment) with a complementary nucleic acid molecule CC complement or fragment) with a complementary nucleic acid molecule CC dather nucleic acid and the complementary nucleic acid permits the CC marker nucleic acid and the complementary nucleic acid permits the CC complementary nucleic acid, where the detection of the molecule; and (b) detecting the level or pattern of the CC complementary nucleic acid is predictive of the level or pattern of the CC complementary nucleic acid is predictive of the level or pattern of the nucleic acid is predictive of the level or pattern of the molecule.

CC The LMFD nucleic acid is used for determining a level or pattern of the molecule in a bovine cell or tissue. It is useful for genome CC mapping, gene identification and analysis, cattle breeding, preparation constructs for use in cattle gene expression, or for genetically constructs for use in cattle gene expression, or for genetically constructs for acttle. The present sequence is one of the 15112 bovine CC LMFD EST (expressed segmence teal nucleic acid as the constructs are nucleic acid as the constructs are nucleic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lactation or muscle and fat deposition (designated price), controlled to from cattle, and the LMFD nucleic acid can specifically hybridise to second nucleic acid molecule comprising any of 15112 nucleotide second nucleic acid molecule comprising any of 15112 nucleotide sequences, appearing as ABX34836-ABX49947, or complements of them. Also included are; (1) a transformed cell having a nucleic acid also included are; (1) a transformed cell having a nucleic acid
                                                                                                     Note: The present sequence was not shown in the specification was obtained in electronic format from the USPTO web site: seqdata.uspto.gov/sequence.html?DocID=20020137139.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Also included are; (1) a transformed cell having a nucleic acid comprising an LMFD nucleic acid linked to a promoter and a 3' non-translated sequence that functions in the cell to cause termination of
                                                                                                                                                                                                                                                                                              improving cattle. The present sequence is one of MFD EST (expressed sequence tag) nucleic acids.
79 A; 37
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      34
      <u>ი</u>
      65 T;
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      0 other;
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밁 Ś US-09-214-836-1 (1-9) Best Local S Query Match: Percent Similarity: Pred. No. Similarity: 1 LysThrTrpGlyGlnTyrTrpAlaVal x ABX45137 (1-215) 21.9 47.00 77.78% 77.78% 81.03% Length: Matches: Conservative: Mismatches: Indels: 9 215 0 0 0

BP;

166 AAGCAATGGGGACAATACTGGCTGGTC 192

AAI85451 ID AAI RESULT 23 06-NOV-2001 AAI85451 standard; cDNA; 493 (first entry) BP.

Human polynucleotide SEQ ID

NO 5511.

AC RRANGE AND ACCORDANCE AND ACCORDANCE AND ACCORDANCE AND ACCORDANCE AND ACCORDANCE ACC Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; hammonocdulatory; cancer; leukaemia; nervous system disorders; arthritis; inflammation; ss. 28-FEB-2000; 18-MAY-2000; 26-FEB-2001; 2001WO-US04927. WO200164835-A2 Homo sapiens. 2000US-0515126. 2000US-0577409.

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RESULT 24
AAL20608
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DB:
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Best Local Similarity:
                        14-JAN-2000;
14-MAR-2000;
24-MAR-2000;
29-MAR-2000;
15-MAY-2000;
09-JUN-2000;
25-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to human polynucleotides (AAI79941-AAI93841) and the encoded proteins (AA000010-AA013910) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activiny inhibin activity and may be useful in the diagnosis and/or restreet for the polypeptide was full in the diagnosis and/or restreet for activity and may be useful in the diagnosis and/or restreet.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tang
                                                                                                                                     10-JAN-2001; 2001WO-US00798
                                                                                                                                                                  19-JUL-2001.
                                                                                                                                                                                             WO200151628-A2
                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                 Human; breast cancer; cell marker; cytostatic; ss.
                                                                                                                                                                                                                                                                              Human breast
                                                                                                                                                                                                                                                                                                          07-DEC-2001
                                                                                                                                                                                                                                                                                                                                     AAL20608
                                                                                                                                                                                                                                                                                                                                                              AAL20608 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    treatment of cancer, leukaemia, nervous system disorders, arthritis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 5511; 1399pp + Sequence Listing; English
(MILL-)
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                                                                                                                                                                                                                                                                                                                                                                                                                        408
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MILLENNIUM PREDICTIVE
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                                                                                                                                                                                                                                                                                                                                                                                                                      AGGGCATGGGGCCAATTTTGGGCCCATT 434
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                        ; 2000US-0176077.
2000US-0189167.
; 2000US-0192099.
; 2000US-0193480.
; 2000US-025230.
; 2000US-0221315.
; 2000US-0221334.
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                                                                                                                                                                                                                                                                              cancer
                                                                                                                                                                                                                                                                                                       (first
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88.89%
55.56%
77.59%
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MEDICINE INC.
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Matches:
Conservative:
Mismatches:
Indels:
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RESULT 25
AAK7323/c
ID AAK732
XX AAK732
AC AAK732
XX Human
XX Human
XX Homo 8
XX Cytost
XX O9-AUG
PF 17-JAN
PF 17-JAN
PR 31-JAN
PR 16-MAR
PR 17-WAR
PR 11-MAR
PR 11-MAR
PR 11-JUI
PR 28-JUI
PR 07-JUI
PR 11-JUI
PR 11-JU
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Query Match:
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                     19-MAY-2000;
07-JUN-2000;
28-JUN-2000;
30-JUN-2000;
07-JUL-2000;
07-JUL-2000;
11-JUL-2000;
11-JUL-2000;
14-JUL-2000;
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                                                                                                                                                                                                                                                                                                                          04-FEB-2000;
24-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cytostatic;
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18-APR-2000;
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                                                                                                                                                                                                                                                                               16-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            immune; haematopoietic;
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2000US-0215135.
2000US-0216647.
2000US-0216880.
2000US-0217487.
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2000US-0189874.

2000US-0190076.

2000US-0198123.

2000US-0205515.

2000US-0209467.
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2000US-0184664.
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                        2000US-0217496
2000US-0218290
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CC amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic cativity, and can be used in gene therapy and vaccine production. (I) cyroteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expression in a patient's genome that affect the patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting the mucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, and cancer metastases of haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703
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-Q=/cgn2 1/USPTO_spool/US09214836/runat_14082003_085041_7665/app_query.fasta_1.398
-DB=Issued_Patents_NA -QFMT=fastap -SUFFIX=rni -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=25
-MODE_LOCAL -OUTFMT=pto -NORW=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-USER=US09214836_GCGN_1 1_76_@runat_14082003_085041_7665 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
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US-09-07-961-26

US-09-267-439-26

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е 28, Арр	псе	equence 28, App	е 5	(D (5	nce 5,	e 28,	7,	29, App	7,	29, App	7,	,7	Sequence 7, Appli	e 1, App	16, App	e 7,	e 6, Appl	۲,	e 1, App	e 1, App	e 6, Appl	e 6, Appl	e 8, Appl	e 3, Appl	e 3, Appl	nce 8, Appl	Sequence 8, Appli	e 135, Ar	e 135, Ap	equence 1, Appl	e 1, Appl	Sequence 146, App

ALIGNMENTS

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RESULT 1
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Patent No. 6500919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. Correction:
GENERAL INFORMATION:
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GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Adema, Gosse Jan; Figdor, Carl Gustav.
TITLE OF INVENTION: Melanoma associated antigenic polypeptide,
TITLE OF INVENTION: epitopes thereof and vaccine against melanoma.
TITLE OF SECUENCES: 38
                                                                                                                                                                                                             COMPUTER: IBM PC COMpatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/388,852B
FILING DATE: February 15, 1995
INFORMATION FOR SEQ ID NO: 9:
                                                      TOPOLOGY: lin
MOLECULE TYPE:
HYPOTHETICAL: N
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                   ZIP: 6525 EX
COMPUTER READABLE FORM:
                ORIGINAL SOURCE:
TISSUE TYPE:
                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 36 base pairs
                                                                                                                                                    TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Nijmegen
STATE: Brabant
  CELL TYPE:
                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE:
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an Leydenlaan 25
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Percent Similarity:
Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                         APPLICATION NUMBER: US/08,
FILING DATE: February 15,
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 2115 base pairs
                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
                                                                                              ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Adema, Gosse Jan; Figdor, Carl Gustav.
TITLE OF INVENTION: Melanoma associated antigenic polypeptide,
TITLE OF INVENTION: epitopes thereof and vaccine against melanoma.
                                                                                                                                  HYPOTHETICAL:
                           FEATURE
                                                                                                                                                  MOLECULE TYPE: CDNA to mRNA
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NAME/KEY:
LOCATION:
                                                                               CELL TYPE: Melanocyte
                                                                                                                                                                            LENGTH: 2115 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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                                        COCATION:
                                                                                                                                                                     ropology:
                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Nijmegen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 AAGACCTGGGGCCAATACTGGCAAGTT 33
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RY: the Netherlands
  6525 EX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LysThrTrpGlyGlnTyrTrpAlaVal 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/08388852B
                                                                                                                                                                                                                                                                                                                                                                                                                      E: Adema, Gosse Jan; Fi
Philips van Leydenlaan
                                    CDS
22...2005
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7...33
misc_signal
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10...36
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an 25
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Mismatches:
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Percent Similarity:
Best Local Similarity:
Query Match:
US-09-214-836-1 (1-9) x US-09-056-105-1 (1-2130)
                                                                                                                       Pred. No.:
                                                                                                                                                                         ; LENGTH: 2130
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-056-105-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-214-836-1 (1-9) x US-08-388-852B-1 (1-2115)
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Best Local Similarity:
Query Match:
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                                                                                                                                                                                                                                           SOFTWARE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/09056105 Patent No. 6287569
                                                                                                                                                                                                                                                                                        APPLICANT: KIPPS, THOMAS J.
APPLICANT: WU, YUNQI
TITLE OF INVENTION: VACCINES WITH ENHANCED INTRACELLULAR
TITLE OF INVENTION: PROCESSING
FILE REFERENCE: 233/221
CURRENT APPLICATION NUMBER: US/09/056,105
CURRENT FILING DATE: 1998-04-06
EARLIER APPLICATION NUMBER: 60/043,467
EARLIER APPLICATION NUMBER: 60/043,467
EARLIER FILING DATE: 1997-04-10
                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc feature
LOCATION: 1792...1870
OTHER INFORMATION: /function = "transmembrane region"
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION: 262...264
OTHER INFORMATION: /bound
FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481 AAGACCTGGGGCCAATACTGGCAAGTT 507
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982...984
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Matches:
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Indels:
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1 LysThrTrpGlyGlnTyrTrpAlaVal 9

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RESULT 5
US-08-231-565A-26
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Best Local Similarity:
Query Match:
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                                                              Patent No. 5874560
GENERAL INFORMATION:
                                                                                               Sequence
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Patent No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124U:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
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 APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
TITLE OF INVENTION: N
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
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APPLICANT: STEVEN A.
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TELEFAX: (212) 751-6849
TELEX: 421792
                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
TOPOLOGY: Unl
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                                                                                               26,
                                                                                                                                                          498 AAGACCTGGGGCCAATACTGG 518
                                                                                                                                                                                       1 LysThrTrpGlyGlnTyrTrp 7
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                                                                                             Application US/08231565A
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PE: cDNA
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                                             KAWAKAMI, YUTAKA; ROSENBERG,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: FLOPPY DISK
IBM PC COMPATIBLE
SYSTEM: PC-DOS/MS-DOS
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50.00
100.00%
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86.21%
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MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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Indels:
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Matches:
Conservative:
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RESULT 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
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                                                                                                                                                                                                                                                                                                                                      Sequence 26,
                                                                                                                                                                                                                                                                                                                     Patent No. 5994523
                                                                                                                                                                                                               APPLICANT: KAWAKAMI, I APPLICANT: STEVEN A. TITLE OF INVENTION: M TITLE OF INVENTION: M TITLE OF INVENTION: M
                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
                                                          ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY I
                                                                                                                                                     NUMBER OF SEQUENCES: 43
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
STREET: 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565A
FILING DATE: 22-APR-1994
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 2172
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REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: FLOPPY DISK
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               COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
                                                                                                                                          STREET: 345 PARK AVENUE CITY: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
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CLASSIFICATION:
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                                                                                                                             YORK
                                                             FLOPPY DISK
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Matches:
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Indels:
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APPLICATION NUMBER:

US/09/007,961

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Best Local Similarity:
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                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY_AGENT INFORMATION:
NAME: CAROL M. GRUPPI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   atent No. 6270778
GENERAL INFORMATION:
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NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEX: 421792
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                        SOFTWAKE: CURRENT APPLICATION DATA:
CURRENT APPLICATION UNMBER: US/09/267,439
                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICATION NUMBER:
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TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: MELANOMA ANTIGENS AND THERAPEUTIC TITLE OF INVENTION: THEIR USE IN DIAGNOSTIC AND THERAPEUTIC TITLE OF INVENTION: METHODS
                                                                                                                                                                                                                         COMPUTER: IBM PC
OPERATING SYSTEM:
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             REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
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345 PARK AVENUE
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               2026-4124US1
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Matches:
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Mismatches:
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Percent Similarity:
Best Local Similarity:
Query Match:
DB:
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US-09-267-439-26
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INFORMATION FOR SEQ ID NO:
                                                                                                                               CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: KAWAKAMI, APPLICANT: STEVEN A.
TITLE OF INVENTION: M.
TITLE OF INVENTION: T.
TITLE OF INVENTION: M.
                                                                        INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: FLOPPY DISK
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                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
                                                                                                                                                                                                                                                                                                                    SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
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              STRANDEDNESS:
TOPOLOGY: Un
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TYPE:
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                                                                                                                    (212) 751-6849
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Matches:
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US-09-252-991A-4794
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Query Match:
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Best Local Similarity:
Query Match:
                                                                                                                     US-09-214-836-1 (1-9) x US-08-388-852B-7 (1-24)
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Sequence 4794, Application US/09252991A Patent No. 6551795
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/388,852B
FILING DATE: February 15, 1995
INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
HYPOTHETICAL: N
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                       ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: Floppy
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TITLE OF INVENTION:
TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                             CELL TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Nijmegen
STATE: Brabant
                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
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Helanoma associated antigenic polypeptide,

Gitopes thereof and vaccine against melanoma.
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Matches:
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RESULT 12
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US-09-784-316-3
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Best Local Similarity:
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Best Local Similarity:
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APPLICANT: MAIC J. Rubenfield et al.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

FILE REFERENCE: 107196.136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: WEI, MING-HUI et al.
APPLICANT: WEI, MING-HUI et al.
TITLE OF INVENTION: ISOLATED HUMAN ENZYME PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN ENZYME PR
TITLE OF INVENTION: THEREOF
FILE REPERENCE: CLOOIL139
CURRENT APPLICATION NUMBER: US/09/784,316
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/09784316 Patent No. 6461843
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CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
PRIOR FILING DATE: 1998-07-27
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                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc_feature
LOCATION: (1)...(65042)
OTHER INFORMATION: n =
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ORGANISM: Human
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TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
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No.:
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Indels:
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Gaps:
                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                               Length:
Matches:
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Matches:
                                                                                                                                                                                                                             Conservative:
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                                                                                                                                                                                                                                                                     65042
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Sequence 64, Application US/08858207A

Patent No. 6348328

INFORMATION:

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US-09-214-836-1 (1-9) x US-08-858-207A-64 (1-1847)
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Best Local Similarity:
                                                                                                                                                                                                                                      US-08-961-527-146/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-858-207A-64
                                                                                                                                                                            Sequence 146, Application US/08961527
Patent No. 6420135
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/017670
FILING DATE: 14-MAY-1996
ATTORNEY/AGENT INFORMATION:
NAME: Gimmi, Edward R
REGISTRATION NUMBER: 38,891
REFERENCE/DOCKET NUMBER: P50-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-4478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: (
SEQUENCE CHARACTERISTICS:
LENGTH: 1847 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Nicholas, Richard
APPLICANT: Nicholas, Robert
APPLICANT: Stodola, Robert
TITLE OF INVENTION: No. 6348328el Compounds
                                                                                                                           APPLICANT: Charles Kunsch
TITLE OF INVENTION: Streptococcus pneumoniae Polynucleotides and Sequences
NUMBER OF SEQUENCES: 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: Fast-SEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 09-MAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 610-270-5090
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: King of Prussia
                                                  CITY: Rockville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                      ADDRESSEE: Human General Avenue
               COUNTRY:
                                                                                                                                                                                                                                                                                                   1411 AAAACTTGGCGACAGTTCTGGAGCGTG 1437
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20850
               Maryland
Y: USA
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Knowles, David
Nicholas, Richard
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                      Human Genome Sciences,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-MAY-1997
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66.67%
74.14%
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Indels:
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Matches:
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US-08-317-310A-1/c
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Best Local Similarity:
Query Match:
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            SOFTWARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/O8/317,310A
FILING DATE: 03-OCT-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: LOUIS MYETS
REGISTRATION NUMBER: 35,965
REGISTRATION NUMBER: JDP-022
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (301) 309-85
INFORMATION FOR SEQ ID NO:
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ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of Communications 
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LENGTH: 11887 base pairs
TYPE: nucleic acid
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APPLICATION NUMBER: US/08/961,527
FILING DATE:
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APPLICATION NUMBER:
FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: (301) 309-8504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: PIERCE, Jacalyn H.
TITLE OF INVENTION: THE IRS FAMILY OF GENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Brookes, A. Anders REGISTRATION NUMBER: 36, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5132 AAAACTTGGCGACAGTTCTGGAGCGTG 5106
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1: USA
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(617) 227-7400
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486/33
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US-09-214-836-1 (1-9) x US-08-317-310A-1 (1-4088)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
PCT-US95-13041-1
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GEQUENCE INFORMATION:
GENERAL INFORMATION:
WHITE, Morris F.
                                                                                                                     TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 4088 base pairs
                                                                                                                                                                            NAME: LOUIS MYSTS
REGISTRATION NUMBER: 35,965
REFERENCE/DOCKET NUMBER: JDP-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (617)227-5941
[NFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                 FILING DATE: Herewith
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/317,310
FILING DATE: 03-OCT-1994
ATTORNEY/AGENT INFORMATION:
                                           FEATURE:
                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: PIERCE, Jacalyn H.
TITLE OF INVENTION: THE IRS FAMILY OF GENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: SUN, APPLICANT: PIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
LOCATION:
                                                                  fype: st.
STRANDEDNESS: st.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH:
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                                                                                                       nucleic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5: LAHIVE & COCKFIELD
60 State Street, Suite 510
                                                                                                                                                   : (617) 227-5941
(617) 227-5941
TN NO: 1:
           CDS
60..4022
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                                                                                                                                                                                                                      JDP-022PC
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Matches:
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Percent Similarity:
Best Local Similarity:
Query Match:
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                                                                          US-09-214-836-1 (1-9) x US-08-592-126-135 (1-629)
                                                                                                                                                                                                                                                                                                score:
                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                      ; INDIVIDUAL US-08-592-126-135
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-214-836-1 (1-9) x PCT-US95-13041-1 (1-4088)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (415) 324-0960 INFORMATION FOR SEQ ID NO: 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: CI
HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Gregory Dolganov TITLE OF INVENTION: Transcrititle OF INVENTION: Polypept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: ILL.
STRANDEDNESS: double of the company of t
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ADDRESSEE: Dehlinger & Associates
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 38,615
REFERENCE/DOCKET NUMBER: 4600-0111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 94306
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/592,126
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   LysThrTrpGlyGlnTyrTrp 7
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72.41%
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Indels:
Gaps:
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Matches:
Conservative:
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Matches:
Conservative:
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                                                                                                                                                                               Indels:
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AAAACATGGGGAAGTTTCTGG 99

RESULT 17 US-09-168-595-135

Sequence

tent No.

135, Application US/09168595 o. 6555666

GENERAL INFORMATION:

Transcripts Encoding

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; MOLECULE TYPE: cDNA to
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; INDIVIDUAL ISOLATE: (
US-09-168-595-135
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Best Local Similarity:
Query Match:
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                                                                                                                                       US-07-814-964-8/c
                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
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                                                                                                     Sequence 8, Application US/07814964
Patent No. 5359047
                                                                                          GENERAL
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NFORMATION FOR SEQ ID NO: 135:
SEQUENCE CHARACTERISTICS:
                                                           APPLICANT:
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TITLE OF INVENTION: Transcripts F
TITLE OF INVENTION: Polypeptides
NUMBER OF SEQUENCES: 151
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CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
              APPLICANT:
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APPLICANT:
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REGISTRATION NUMBER: 38
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: double
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                          INFORMATION:
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                                                                                                                                                                                   AAAACATGGGGAAGTTTCTGG 99
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                           Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
Pil, Pieter M.
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Kellett, Patti
              Brown, Steven
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Matches:
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RESULT 19
US-08-258-442-8/c
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Best Local Similarity:
Query Match:
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                                                                                                                                                            Sequence 8, Appli
Patent No. 567062
                                                                                                                                               GENERAL INFORMATION:
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APPLICANT: Lippard, (
TITLE OF INVENTION: 1
TITLE OF INVENTION: 1
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LIBRARY: Human B
CLONE: lambda-Pt1
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REFERENCE/DOCKET NUMBER: MITTELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
ORIGINAL SOURCE:
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PRIOR APPLICATION DATA:
                                                                                                  APPLICANT:
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ATTORNEY/AGENT INFORMATION:
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                                                                               APPLICANT:
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FILING DATE: 18-JUN-1990
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REGISTRATION NUMBER: 32,
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T: Bssigmann, John M.T: Lippard, Stephen J.INVENTION: DNA Structure Specific Recognition
                                                                                                                                                                              Application US/08258442
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2 Militia Drive
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Bruhn, Suzanne I
Pil, Pieter M.
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Lippard, Stephen J.
                                                Kellett, Patti
                                                             Brown, Steven
                                                                                                                                Donahue,
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                                                                                                                            Brian
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                                                                                                                                                                                                                                                                                                                                      Gaps:
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Matches:
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Best Local Similarity:
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                                                                                                                                                                           Sequence 3, Application US/08328809
Patent No. 5705334
                                                                                                                                                            GENERAL INFORMATION:
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ORIGINAL SOURCE:
ORGANISM: Homo
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No.:
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                                APPLICANT:
APPLICANT:
APPLICANT: Kellett, Patti
TITLE OF INVENTION: Uses For DNA Structure-Specific
TITLE OF INVENTION: Recognition Proteins
                                                                                              APPLICANT:
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                                                                 APPLICANT:
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APPLICATION NUMBER: US 07/539,906
FILING DATE: 18-JUN-1990
                                                                                                                                               APPLICANT:
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NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LIBRARY: Huma..
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REFERENCE/DOCKET NUMBER: MIT-4787AAA
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OPERATING SYSTEM: PC-DOS/MS-DOS
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ZIP: 02173
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                                                                             Essigmann, John M.
Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
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                                             Brown, Steven
                                                              Pil, Pieter M.
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                                                                                                                          Lippard, Stephen J
Essigmann, John M.
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62.50%
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Matches:
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Percent Similarity:
Best Local Similarity:
Query Match:
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TELEFAX: 617-248-7100
INFORMATION FOR SEQ ID NO:
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ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy d
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ORIGINAL SOURCE:
                                                                          CORRESPONDENCE ADDRESS
ADDRESSEE: Patent Ac
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FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Rel-BASE #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                          APPLICANT:
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STATE: MA
COUNTRY: US
ZIP: 02109
                                                                                                                                                                PPLICANT:
                                                                                              PPLICANT: Kellett, Patti
ITLE OF INVENTION: Uses For DNA Structure-Specific
ITLE OF INVENTION: Recognition Proteins
UMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Fenton, Gillian M
REGISTRATION NUMBER: 36,
REFERENCE/DOCKET NUMBER:
                                          CITY: Boston
                                                         STREET:
                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM:
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CITY: Boston
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                                                         53 State Street
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Essigmann, John M.
Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
                 USA
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41.00
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Matches:
Conservative:
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                                                                         Testa, Hurwitz & Thibeault
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Best Local Similarity:
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TELEPHONE: 617-248-7000
TELEPAX: 617-248-7100
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1898 base pairs
TYPE: mucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 8, Application:
          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
COMPUTER: DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                       APPLICANT: Essigmann, John M.
APPLICANT: Lippard, Stephen J.
TITLE OF INVENTION: DNA Structure Specific Recognition
TITLE OF INVENTION: Protein and Uses Therefor
NUMBER OF SEQUENCES: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
ORIGINAL SOURCE:
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CLASSIFICATION:
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OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                             COUNTRY: UZIP: 02173
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                                                                                                                                                           CITY: Lexington
APPLICATION NUMBER:
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2 Militia Drive
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Essigmann, John M.
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)N: 435
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41.00
87.50%
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PCT/US92/11107
                                                                                                                                                                                              Brook, Smith & Reynolds, P.C
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Matches:
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Indels:
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US-07-814-964-6/c
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Best Local Similarity:
Query Match:
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            ZIP: 02173

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/814,964

FILING DATE: 19911226

CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 617-861-9540 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
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APPLICANT:
APPLICANT:
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No.:
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ORGANISM: Homo sapiens
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APPLICATION NUMBER: US 0:
FILING DATE: 18-TUN-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 1:
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                          APPLICANT: Essigmann, John M.
APPLICANT: Lippard, Stephen J.
TITLE OF INVENTION: DNA Structure Specific Recognition
TITLE OF INVENTION: Protein and Uses Therefor
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LIBRARY: Human
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                          CITY: Lexington STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                           ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
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Toney, Jeffrey H.
Bruhn, Suzanne L.
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Matches:
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Indels:
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US 07/539,906

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
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INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
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                                 SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
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ORIGINAL SOURCE:
ORGANISM: Hom
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REFERENCE/DOCKET NUMBER: MIT-4787AAA
TELECOMMUNICATION INFORMATION: .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
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                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                   COUNTRY:
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                                                                                                                                                                                                                                                                                   USA
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Lippard, Stephen J.
VENTION: DNA Structure
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Toney, Jeffrey H.
Bruhn, Suzanne L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brown, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kellett, Patti
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87.50%
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US/08/258,442
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Indels:
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RESULT 25
US-08-328-809-1/c
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Query Match:
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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APPLICANT:
                                                        ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 18-JUN-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                      NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                     APPLICANT: Kellett, Patti
TITLE OF INVENTION: Uses For DNA Structu:
TITLE OF INVENTION: Recognition Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IMMEDIATE SOURCE:
CURRENT APPLICATION DATA:
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ORIGINAL SOURCE:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-861-6240
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                                                                                                                                                                                                                                                                                                                      APPLICANT:
                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                         ADDRESSEE: Pace...
ADDRESSEE: Pace...
                                                                                                                             STATE:
                                                                                                         COUNTRY:
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REGISTRATION NUMBER: 32,227
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                                                                                                                                                                                                                                                                                                      Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
             PatentIn Release #1.0,
                                                                                                                                                                                                                                                                        Brown, Steven
                                                                                                                                                                                                                                                                                        Pil, Pieter M.
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275..2404
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                                                          Floppy disk
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41.00
87.50%
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                                                                                                                                                                                                                                                                                                                                                   n, Stephen J.
                                                                                                                                                                                                                                         Uses For DNA Structure-Specific
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Matches:
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Indels:
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               Version #1.25
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Alignment Scores: Pred. No.: Score:
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NAME: Fenton, Gillian M.

REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: MIT-023 (5473/24)

TELECOMMUNICATION INFORMATION:
TELEPAN: 617-248-7100
TELEPAX: 617-248-7100
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 2839 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                               US-08-328-809-1
                                                                                                                                                                                                                                                                                     MOLECULE TYPE: CDNA
ORIGINAL SOURCE:
ORGÀNISM: Homo sapiens
IMMEDIATE SOURCE:
CLONE: human SSRP - composite of six overlapping
CLONE: cDNA clones
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 11q12
                                                                                                                                                                                                                                           FEATURE: CDS
NAME/KEY: CDS
LOCATION: 275..2404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/328,809 FILING DATE: CLASSIFICATION: 435
2372 AGCTGGGGGAGTACTGGCTAGTT 2349
                  2 ThrTrpGlyGlnTyrTrpAlaVal 9 :::||||||:::|||||
                                                                                                            908
41.00
87.50%
62.50%
70.69%
                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
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2
2
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Search completed: August 24, 2003, 03:59:06 Job time : 62 secs g á Percent Similarity:
Best Local Similarity:
Query Match: US-09-214-836-1 (1-9) x US-08-328-809-1 (1-2839)

1, Appli 76, Appl

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Command line parameters:

-MODEL-frame+ p2n.model -DEV=xlh
-Q=/Ggn2 1/USPTO_Spool/US09214836/runat_14082003_085045_7758/app_query.fasta_1.398
-DB=PublIshed_Applications_NA -QFMT=fastap -SUFFTX=rnpb -MINMATCH=0.1
-LOOPEXT=0 -UNITS=bits -START=1 -RND=-1 -MATRIX=blosum62
-TRANS=human40.cdi -LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100
-THR MIN=0 -ALIGN=25 -MODE=LOCAL -OUTPMT=pto -NORM=ext -HEAPSTZE=500 -MINLEN=0
-MAXLEN=200000000 -USER=US09214836_@CGN 1 1 290 @runat 14082003_085045_7758
-NCPU=6 -ICPU=3 -NO_MAND -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -
-LONGLOG -DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5
-FGAPOP=6 -FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
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Maximum DB seq
                                                            Result
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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                                            Score
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length: 2000000000
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
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Match Length DB
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58
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134.442 Million cell updates/sec
          91.4
                                                                                                                                                                                      | Cgn2_6/ptodata/1/pubpna/USO7_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO6_NEW_PUB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO7_NEW_PUB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO7_NEW_PUB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO8_NEW_PUB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO9_PUBCOMB.seq:*
| Cgn2_6/ptodata/1/pubpna/USO9_NEW_PUB.seq:*
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          9
                                            IJ
          US-09-862-260A-1
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0.5
7.0
                                         Description
Sequence 1, Appli
                                                                                                                                                                        GENERAL INFORMATION:

APPLICANT: NICOlette, Charles A.

ITITLE OF INVENTION: THERAPBUTIC ANTI-MELANOMA COMPOUNDS

FILE REFERENCE: 126881210200

CURRENT APPLICATION NUMBER: US/09/862,260A

CURRENT FILING DATE: 2001-05-21

PRIOR APPLICATION NUMBER: 60/208,955

PRIOR APPLICATION NUMBER: 60/267,877

PRIOR FILING DATE: 2001-02-09

NUMBER OF SEQ ID NOS: 23
       Alignment Scores:
Pred. No.:
Score:
                                                                             US-09-862-260A-1
                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
US-09-862-260A-1
                                                                                                                                           SOFTWARE: FastSEQ for Windows Version SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/09862260A Patent No. US20020082217A1
                                                                                         LENGTH: 2130
TYPE: DNA
ORGANISM: Homo
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53.00
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114 US-10-207-655-76
124 US-10-047-539-3
14 US-10-047-539-3
14 US-10-047-539-3
15 US-09-898-860-26
12 US-09-960-352-10302
13 US-10-027-632-7719
13 US-10-027-632-75093
14 US-10-128-714-100
15 US-09-764-853-910
16 US-09-764-891-5631
17 US-09-764-891-5631
18 US-10-027-632-9711
19 US-09-764-891-5631
11 US-09-764-891-5627
12 US-09-867-701-3370
13 US-09-9867-701-3370
14 US-09-9867-701-3370
15 US-09-9867-701-3373
16 US-09-9867-701-3373
17 US-09-9867-701-3373
18 US-09-9867-701-3373
18 US-09-9880-107-1761
19 US-09-9880-107-1761
29 US-09-9880-107-1761
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29 US-09-9880-107-1763
29 US-09-9880-107-1763
29 US-09-9880-107-1763
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29 US-09-9880-107-1763
29 US-09-9764-868-335
20 US-09-764-868-335
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       Length:
Matches:
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Sequence 9572, Ap
Sequence 1761, Ap
Sequence 6145, Ap
Sequence 10480, A
Sequence 4333, A
Sequence 8331, A
Sequence 8331, A
Sequence 99172, A
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Sequence 97711, Ap
Sequence 100, App
Sequence 5100, Ap
Sequence 510, App
Sequence 541, App
Sequence 624, App
Sequence 624, App
Sequence 624, App
Sequence 624, App
Sequence 5463, App
Sequence 5463, App
Sequence 5463, App
Sequence 623, App
Sequence 623, App
Sequence 623, App
Sequence 5677, Ap
Sequence 3370, Ap
Sequence 370, Ap
Sequence 2927, Ap
Sequence 2927, Ap
Sequence 2927, Ap
Sequence 23233, A
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Sequence 8, Appli
Sequence 26, Appli
Sequence 1, Appli
Sequence 10302, A
Sequence 37178, A
Sequence 75092, A
Sequence 75092, A
Sequence 1345, Ap
Sequence 1345, Ap
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Sequence
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US-10-207-655-76

J. Sequence 76, Application US/10207655

Publication No. US20030118592A1

GENERAL INFORMATION:
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Best Local Similarity:
               Query Match:
                                 Percent Similarity:
Best Local Similarity:
                                                                                  Alignment Scores
Pred. No.:
                                                                                                                                  ; TYPE: DNA
; ORGANISM: Homo
US-10-207-655-76
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Best Local Similarity:
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                                                                                                                                                                                  SOFTWARE: PatentIn version 3.0
SEQ ID NO 76
LENGTH: 2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/09812238B Patent No. US20020169132A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 1
                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/207,655
CURRENT FILING DATE: 2002-07-25
NUMBER OF SEQ ID NOS: 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Nicolette, Charles
TITLE OF INVENTION: THERAPEUTIC ANTI-MELANOMA COMPOUNDS
FILE REFERENCE: GZ 2094.00
                                                                                                                                                                                                                                                                                        FILE REFERENCE: 390069.401C1
                                                                                                                                                                                                                                                                                                        APPLICANT: Hayden-Ledbetter, Martha S.
TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
                                                                                                                                                                                                                                                                                                                        APPLICANT: Ledbetter, Jeffrey A. APPLICANT: Hayden-Ledbetter, Martha S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 19
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LOCATION: (22)...(2004)
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TYPE: DNA
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                                               Length:
Matches:
Conservative:
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Gaps:
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Matches:
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US-09-214-836-1 (1-9) x US-10-047-539-3 (1-2131)
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Best Local Similarity:
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                                                                                                                                                                                         FILE REFERENCE: MXI-166CP
CURRENT APPLICATION NUMBER: US/10/035,637
CURRENT FILING DATE: 2001-11-07
PRIOR APPLICATION NUMBER: 09/851,614
PRIOR FILING DATE: 2001-03-08
PRIOR APPLICATION NUMBER: USSN 60/203,126
PRIOR APPLICATION NUMBER: USSN 60/230,739
PRIOR APPLICATION NUMBER: USSN 60/230,739
PRIOR APPLICATION NUMBER: USSN 60/230,739
PRIOR FILING DATE: 2000-09-07
                                                                                                                                 SOFTWARE: 1
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 8, Application US/10035637
Publication No. US20030031667A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: EP 01 10 0914.9 PRIOR FILING DATE: 2001-01-16 NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: VOS-27
CURRENT APPLICATION NUMBER: US/10/047,539
CURRENT FILING DATE: 2002-01-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: MOLLING, KARIN
APPLICANT: PAVLOVIC, JOVI
APPLICANT: NAWRATH, MICHI
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Deo, Yas
APPLICANT: Keler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: PAVLOVIC, JOVAN
APPLICANT: NAWRATH, MICHAEL
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING
TITLE OF INVENTION: CANCER
                                                                                      LENGTH: 23
TYPE: DNA
                                                                                                                                                                            NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODIES TO DENDRITIC DE INVENTION: CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Ver. 2.1
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ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CDS
LOCATION: (12
                                                               ORGANISM: Homo sapiens
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NAME/KEY: CDS
LOCATION: (16489)...(17094)
                                           FEATURE
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No.:
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                                                                                                            23770
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                                                                                                                                                     FastSEQ for Windows Version 4.0
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US-10-035-637-8

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Sequence 26, Application US/0989
Publication No. US20030144482A1
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   Query Match:
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                                                                                                                  US-09-898-860-26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 26:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10671 AAGACCTGGGGCCAATACTGGCAAGTT 10645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20:
TELECOMMUNICATION IMFORMATION:
TELEPHONE: (212) 758-4800
                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/09/267,439
FILING DATE: <Unknown>
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/898,860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: MELANOMA ANTIGENS AND THERAPEUTIC
                                                                                                                                               TOPOLOGY: Unkn
MOLECULE TYPE: cDNA
                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 03-Jul-2001 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
                                                                                                                                 SEQUENCE DESCRIPTION: SEQ ID NO: 26:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 LysThrTrpGlyGlnTyrTrpAlaVal 9
                                                                                                                                                                               TYPE: nucleotide
STRANDEDNESS: Double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 345 PARK AVENUE
                                                                                                                                                                                                                                                              TELEX: 421792
                                                                                                                                                                                                                                                                            TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                              NAME: CAROL M. GRUPPI
                                                                                                                                                                                                             LENGTH: 2172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/09898860
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100.00%
100.00%
86.21%
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53.00
88.89%
88.89%
91.38%
                                                                                                                                                            Unknown
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                                Length:
Matches:
Conservative:
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                  Mismatches:
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Percent Similarity:
Best Local Similarity:
Query Match:
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                      Alignment Scores: Pred. No.:
                                                                                      US-09-960-352-10302
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US-09-960-352-10302
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-047-539-1
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                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Warren, Weeley C.
APPLICANT: Tao, Nengbing
APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
TITLE OF INVENTION: MUSCLE AND PAT DEPOSITION
FILE REFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
                                                                                                                                                                      CURRENT FILING DATE: 2001-1
NUMBER OF SEQ ID NOS: 15112
SEQ ID NO 10302
LENGTH: 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 13
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10302, Application Patent No. US20020137139A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/047,539
CURRENT FILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: EP 01 10 0914.9
PRIOR FILING DATE: 2001-01-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING TITLE OF INVENTION: CANCER FILE REFERENCE: VOS-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: MOLLING, KARIN
APPLICANT: PAVLOVIC, JOVAN
APPLICANT: NAWRATH, MICHAEL
                                                                                               ORGANISM: Bos taurus
OTHER INFORMATION: Clone ID: 44-LIB34-021-Q1-E1-C8
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LOCATION: (1)..(1881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Mus musculus
FEATURE:
                                                                                                                                                  TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               460 AAGACCTGGGGAAAATACTGGCAAGTT 486
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49.00
88.89%
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Length:
Matches:
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Matches:
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Best Local Similarity:
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Best Local Similarity:
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PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR FILING DATE: 2000-04-20
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOPTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 37178
LENGTH: 517
TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                          Sequence 75092, Application US/10027632 GENERAL INFORMATION:
APPLICANT: Wang, David G.

TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108827.129

CURRENT APPLICATION NUMBER: US/10/027,632

CURRENT FILING DATE: 2002-04-30

PRIOR APPLICATION NUMBER: US 60/218,006

PRIOR FILING DATE: 2000-07-12

PRIOR FILING DATE: 2000-07-12

PRIOR FILING DATE: 2000-04-20

PRIOR FILING DATE: 2000-04-20

PRIOR APPLICATION NUMBER: US 60/193,483

PRIOR APPLICATION NUMBER: US 60/193,483

PRIOR FILING DATE: 2000-03-29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 60/218,006 PRIOR FILING DATE: 2000-07-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 60/167,363
FILING DATE: 1999-11-23
APPLICATION NUMBER: US 60/156,358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1999-09-28
APPLICATION NUMBER: US 60/146,002
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                                                                                                                                                                                                                                                                                                                                                                                          AAGACCTGGGGTAGATACTGG 398
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Conservative:
Mismatches:
Indels:
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Indels:
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; LENGTH: 517
; TYPE: DNA
; ORGANISM: Human
US-10-027-632-75092
US-09-214-836-1 (1-9) x US-10-027-632-75093 (1-517)
                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                           Pred. No.:
                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                            ; ORGANISM: Human US-10-027-632-75093
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Query Match:
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PRIOR FILING DATE: 2000-07-12
PRIOR APPLICATION NUMBER: US 60/198,676
PRIOR FILING DATE: 2000-04-20
PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/193,483
PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR FILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR APPLICATION NUMBER: US 60/165,358
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR APPLICATION NUMBER: US 60/146,002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                  SOFTWARE: FASTSEQ
SEQ ID NO 75093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 75092
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PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR FILING DATE: 1999-11-23
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR FILING DATE: 1999-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: 108827.129
CURRENT APPLICATION NUMBER: US/10/027,632
CURRENT FILING DATE: 2002-04-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Wang, David G.
TITLE OF INVENTION: Identification and Mapping of Single Nucleotide
TITLE OF INVENTION: Polymorphisms in the Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/185,218 PRIOR FILING DATE: 2000-02-24
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                                                                                                                                                                                                                                                                        TYPE: DNA
                                                                                                                                                                                                                                                                                             ENGTH:
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                                                                                                                                                                                                                                                                                                                                          for Windows Version 4.0
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1 LysThrTrpGlyGlnTyrTrp 7

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RESULT 13
US-10-198-846-13052
US-10-198-846-13052; Sequence 13052, Application US/10198846; Publication No. US20030099974A1; GENERAL INFORMATION:
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                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
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SQIFTWARE: PatentIn Ver. 2.0
SQ ID NO 1345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/783,590
CURRENT FILING DATE: 2000-02-15
PRIOR APPLICATION NUMBER: 08/420,856
PRIOR FILING DATE: 1995-04-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Li, Haodong
APPLICANT: Rosen, Craig A.
APPLICANT: Ruben, Steven M.
TITLE OF INVENTION: Human Genes, Sequences, and Expression Products 16.
FILE REFERENCE: PO-16.2C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Dillon, Patrick J.
APPLICANT: Haseltine, William A.
APPLICANT: Li, Haodong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 08/346,731 PRIOR FILING DATE: 1994-11-21
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                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: n equals a,t,g,
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Best Local Similarity:
Query Match:
US-09-214-836-1 (1-9) x US-09-918-995-565 (1-458)
                                                    Query Match:
                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                               Alignment Scores: Pred. No.:
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US-09-918-995-565
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SEQ ID NO 13052
LENGTH: 1803
                                                                                                                                                                                                                                                                                                                     SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 565
LENGTH: 458
                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Hyseq, Inc.
TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED
TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES
FILE REFERENCE: 20411-756
CURRENT APPLICATION NUMBER: US/09/918,995
CURRENT FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: US/09/235,076
PRIOR PRIOR FILING DATE: 1999-01-20
NUMBER OF SEQ ID NOS: 38054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/198,846
CURRENT FILING DATE: 2002-07-18
PRIOR APPLICATION NUMBER: 60/306,220
PRIOR FILING DATE: 2001-07-18
NUMBER OF SEQ ID NOS: 14084
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TITLE OF INVENTION: NOVEL GENES, COMPOSITIONS, KITS,
TITLE OF INVENTION: FOR IDENTIFICATION, ASSESSMENT,
TITLE OF INVENTION: THERAPY OF BREAST CANCER
FILE REFERENCE: MRI-049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Lillie, James
                                                                                                                                                                                                   NAME/KEY: misc_feature
LOCATION: (1)...(458)
OTHER INFORMATION: n =
                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Homo sapiens FEATURE:
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OTHER INFORMATION: n = A, T, C or
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ORGANISM: Homo sapiens
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                                     Gaps:
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Matches:
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Percent Similarity:
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; ORGANISM: Human
US-10-027-632-97711
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SEQ ID NO 97711
LENGTH: 1839
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                                                                                                                                                                                                             APPLICANT: Hu, Wengi
APPLICANT: Tishkoff, Daniel
APPLICANT: Zamudio, Carlos
APPLICANT: Zamudio, Carlos
APPLICANT: Lemieux, Sebastien M
APPLICANT: Lemieux, Sebastien M
TITLE OF INVENTION: Identification of Essential Genes in Aspergillus fumigatus and
TITLE OF INVENTION: Methods of Use
FILE REFERENCE: 10182-018-999
PRIOR APPLICATION NUMBER: US 60/287,066 PRIOR FILING DATE: 2001-04-27 PRIOR APPLICATION NUMBER: US 60/295,890 PRIOR FILING DATE: 2001-06-05 PRIOR APPLICATION NUMBER: US 60/303,899
                                                                                                                  CURRENT APPLICATION NUMBER: US/10/128,714
CURRENT FILING DATE: 2002-04-23
PRIOR APPLICATION NUMBER: US 60/285,697
PRIOR FILING DATE: 2001-04-23
                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Jiang, so APPLICANT: Hu, Wengi
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PRIOR FILING DATE: 2000-03-29
PRIOR APPLICATION NUMBER: US 60/185,218
PRIOR FILING DATE: 2000-02-24
PRIOR APPLICATION NUMBER: US 60/167,363
PRIOR FILING DATE: 1999-11-23
PRIOR APPLICATION NUMBER: US 60/156,358
PRIOR APPLICATION NUMBER: US 60/156,358
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CURRENT FILING DATE: 2002-04-30
PRIOR APPLICATION NUMBER: US 60/218,006
PRIOR FILING DATE: 2000-07-12
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1 LysThrTrpGlyGlnTyrTrp 7
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4326 CGCACTTGGGGGGAATACTGG 4346

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US-09-214-836-1 (1-9)
                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                        Alignment Scores: Pred. No.:
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; ORGANISM: Aspergillus fumigatus
US-10-128-714-5100
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US-10-128-714-5100
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; ORGANISM: Aspergillus fumigatus
US-10-128-714-100
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SEQ ID NO 100
LENGTH: 3913
                                                                                                                                                                                                                                                                            SEQ ID NO 5100
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Publication No. US20030119013A1
                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/287,066
PRIOR FILING DATE: 2001-04-27
PRIOR APPLICATION NUMBER: US 60/295,890
PRIOR FILING DATE: 2001-06-05
PRIOR PPLICATION NUMBER: US 60/303,899
PRIOR FILING DATE: 2001-07-09
PRIOR PILING DATE: 2001-07-09
PRIOR APPLICATION NUMBER: US 60/316,362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: 10182-018-999
CURRENT APPLICATION NUMBER: US/10/128,714
CURRENT FILING DATE: 2002-04-23
PRIOR APPLICATION NUMBER: US 60/285,697
PRIOR FILING DATE: 2001-04-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Broshkin, Alexey M
APPLICANT: Lemieux, Sebastian M
TITLE OF INVENTION: Identification of Essential Genes in Aspergillus fumigatus and
TITLE OF INVENTION: Methods of Use
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APPLICANT: Hu, Wengi
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PRIOR APPLICATION NUMBER: US 60/316,362
PRIOR FILING DATE: 2001-08-31
NUMBER OF SEQ ID NOS: 8603
                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn version 3.1
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Zamudio, Carlos
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US-09-764-891-5464/c
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US-09-764-853-910/c
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Publication No. US20030077808A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PC006
CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 2001-01-17
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APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PJZ06
                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 5464
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NAME/KEY: SITE
LOCATION: (835)
OTHER INFORMATION: n
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CURRENT FILING DATE: 2001-01-17
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ORGANISM: Homo
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Percent Similarity:
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US-10-073-865-140/c
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US-09-764-891-5631/c
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NUMBER OF SEQ ID NOS: 154
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 140
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Publication No. US20030077808A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 140, Applic Publication No. US20 GENERAL INFORMATION:
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SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 5631
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TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PUZO9C1
CURRENT APPLICATION NUMBER: US/10/073,865
CURRENT FILING DATE: 2002-02-14
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CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 2001-01-17
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LOCATION: (835)
OTHER INFORMATION: n equals a,t,g,
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RESULT 22 US-10-103-313-624/c

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Publication No. US20030082758A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PJZ07C1
CURRENT APPLICATION NUMBER: US/10/103,313
CURRENT FILING DATE: 2002-03-12
                                                                                                                                                                                                                                                                                                                                                                 Prior Application removed - See file Wrapper or Palm NUMBER OF SEQ ID NOS: 116
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 112
TENOTH: 8159
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Prior Application removed - See File Wrapper or Palm SOFTWARE: Patentin Ver. 2.0
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CURRENT FILING DATE: 2002-02-14
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TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PJZ03C1
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LOCATION: (835)
OTHER INFORMATION: n equals a,t,g,
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ORGANISM: Homo sapiens
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US-09-764-853-909/c
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US-09-764-891-5463/c
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GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                       Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 10231
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CURRENT FILING DATE: 2001-01-17
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TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PC006
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TITLE OF INVENTION: Nucleic Acids, Proteins, and
FILE REFERENCE: PJZ06
CURRENT APPLICATION NUMBER: US/09/764,853
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prior application data removed - consult PALM NUMBER OF SEQ ID NOS: 939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 8165
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                              LENGTH: 8165
TYPE: DNA
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7279
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 ThrTrpGlyGlnTyrTrpAlaVal 9 :::||||||||
                                  2 ThrTrpGlyGlnTyrTrpAlaVal 9
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Matches:
Conservative:
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Search completed: August 24, Job time: 163.5 secs

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Command line parameters:

-MODEL-frame+ p2n.model -DEV=xlh
-Q=/cgn2 1/USPTO_spool/US09214836/runat 14082003_085040_7605/app_query.fasta_1.398
-Q=/cgn2 1/USPTO_spool/US09214836/runat 14082003_085040_7605/app_query.fasta_1.398
-DB=EST -QPMT=fastap -SUFFIX=rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=25 -MODE=LOCAL
-OUTFMT=bto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US09214836_@CGN 1 1 3596 @runat 14082003 085940 7605 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database :
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB seq length: 0
Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM protein - nucleic search, using frame_plus_p2n model
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                        US-09-214-836-1
58
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22781392 seqs, 12152238056 residues
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gb_est1:*
gb_est2:*
gb_htc:*
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em_estpl:*
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em_estfun:*
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9: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result

Score

Query Match

Length DB ID

Description

Hominidae;	; Primates; Catarrhini	" " !	REFERENCE 1
Vort ohrat a	Chordata: Cra	ms (r	ORGANISM Hor
	91100		EYWORDS
		mRNA sequence. 78421	SSION
mRNA linear EST 15-JUL-2002 sapiens cDNA clone IMAGE:6258718	304 bp mRNA NIH_MGC_112 Homo sapi	8281395	RESULT 1 BQ678421 LOCUS DEFINITION AGE
	ALIGNMENTS		
602740	2 BG76671	1.4 698	U
60130	0 BE40871	1.4 690	. A.
81209	0 BG77057	1.4 684	лu
BE277419 601179283	10 BE277419	91.4 680	41 53
602718	2 BG76145	1.4 678	о · ·
CS103	4 CA38987	1.4 671	о 60 л UT
60273	2 BG76428	1.4 667	7 5
60271	2 BG76039	1.4 666	ה נ ה נ
602/4	0 86/6803	1.4 657	ח ייב
8095 601284	0 BE38809	1.4 655	. ω . υ
961 DKFZp7	AL134961	1.4 650	5
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6391 60273	2 BG76639	1.4 640	n UT
9568 60274	2 BG76956	1.4 630	80
6204 60114	0 BE27620	1.4 628	7 0
4085 60127	0 BE38408	1.4 622	ייטי
6195 cs75b	4 CA39619	1.4 619	5
9689 60128:	BE38968	1.4 616	S
2309 UI-E-I	2 BM72230	1.4 606	n 05
7065 cs85f	4 CA39706	1.4 605	0
1374 60271	2 BG76137	1.4 605	vo c
4038 60137	0 BG76786	1.4 603	n o
3315 60157	0 BE74331	1.4 595	ı on
2070 60271	2 BG76207	1.4 594	ST .
6509 CS780	4 CA39650	1.4 587	ט ב
1030 60115	0 BE28103	1.4 585	, v
7722 cs94g	4 CA39772	1.4 577	. 1
601303	0 BE40881	1.4 546	O U
60115	0 BE28051	1.4 531	თ ს
60130	BE27687	1.4 515	лU
UI-E-C	2 BM70792	1.4 506	·
60128	0 BE38916	1.4 506	ຫ
601283	14 CB792319	1.4 436 1.4 503	n tr
UI-E-C	2 BM70848	1.4 384	ເທ
AGENC	w	1.4 304	· UT

REFERENCE

(bases 1 to 304)

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AUTHORS
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KEYWORDS
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Best Local Similarity:
Query Match:
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                                                                                                          COMMENT
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TITLE
JOURNAL
                                                                                                                           MEDLINE
PUBMED
                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
Contact: Soares, MB
Coordinated Laboratory for Computational Genomics
University of Iowa
375 Newton Road , 4156 MEBRF, Iowa City, IA 5224
Tel: 319 335 8250
Fax: 319 335 9565
                                                                                                                                                                                                                                                                                                                                                                                                 BM708487 ARNA linear E BM708487 ARNA linear E UI-E-CI1-afu-b-14-0-UI-I UI-E-CII Homo sapiens cDNA UI-E-CI1-afu-b-14-0-UI 5', mRNA sequence.
                                                                                                                           8889548
                                                                                                                                                                Genome Res. 6 (9), 791-806 (1996)
                                                                                                                                                                                          discovery
                                                                                                                                                                                                                                   Bona.
                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                            BM708487.1 GI:19021745
EST.
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Plate: LLCM2415 row: a column: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
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National Institutes of Health, Mammalian Gene Collection (MGC)
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                                                                                                                                                                                                             Normalization and subtraction: two
                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LysThrTrpGlyGlnTyrTrpAlaVal 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGACCTGGGGCCAATACTGGCAAGTT 39
                                                                                                                                                                                                                               (bases 1 to 384) haldo, M.F., Lennon, G. and Soares, M.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    quality sequence stop: 303.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="melanotic melanoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="MIH_MCC_112"
/note="Organ: skin; Vector: pOTB7; Site_1: XhoI; Site_2:
EcoRI; cDNA made by oligo-dT priming. Directionally cloned
into EcoRI/XhoI sites using the following 5' adaptor:
GGCACGAG(G). Library constructed by Ling Hong in the
laboratory of Gerald M. Rubin (University of California,
Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and
Superscript II RT (Life Technologies). Note: this is a
NIH_MGC_Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
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c 86 g
                                         MEBRF, Iowa City, IA 52242, USA
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                   One Amgen Center Drive, Thousand Oaks, Tel: 805 447-4881
                                                                                       Unpublished
Contact: Dan Fitzpatrick
                                                                                                                                                                                                                                                                                                                          EST
                                                                                                                                                                                                                                                                                                                                               norvegicus cDNA clone ni
CB792319
CB792319.1 GI:29880712
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Tissue Procurement: Dr. Gregg Hageman
CDNA Library preparation: Dr. M. Bento Soares, Univeristy of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa
DNA Sequencing by: Dr. M. Bento Soares, Univeristy of Iowa
Clone Distribution: Researchers may obtain clones from Research
                                                                   Amgen,
                                                                                                                                    Amgen EST Program.
Amgen Rat EST Program
                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                 Rattus norvegicus
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Plate: 00003
                                                                                                                                                                                                        Rattue
                                                                                                                                                                                                                                                                                                  Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genetics (www.resgen.com)
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                                                                   Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ×
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/mol_type="mRNA"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="UI-E-CII-afu-b-14-0-UI"
/clone="UI-E-CII-afu-b-14-0-UI"
/tissue type="RPE and Choroid"
/dev_stage="adult"
/lab_host="DH10B_(Life Technologies) (TI phage resistant)"
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nrhy4-00003-d6 5', mRNA sequence.
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http://image.llnl.gov
Plate: LLCM249 row: j column: 17
High quality sequence start: 25
High quality sequence stop: 503.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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601282169F1 NIH_MGC_44 Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
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                                                                                                                                                                                                                                                                                                                                                                                                                                DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium ()
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                                                                /organism="Homo sapiens"
/mol type="mRNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="IMAGE:3603952"
/tissue_type="endometrium, adenocarcinoma cell line"
/lab_host="DH10B (phage-resistant)"
/clone lib="NH1MGC 44"
/clone lib="NH1MGC 44"
/note="Organ: uterus; Vector: pOTB7; Site_1: XhoI; Site_2:
EcoRI; cDNA made by oligo-dT priming. Directionally
cloned into EcoRI/XhoI sites using the following 5'
adaptor: GGCACGAG(G). Library constructed by Ling Hong
in the laboratory of Gerald M. Rubin (University of
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/note="Vector: pSpORT1; Site 1: Sall; Site 2: Not1; W Rat hypothalamus adult female Wistar rat avg. Insert size 2.3 kb fraction 6 and 7"
113 c 112 g 83 t 39 others
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Primates;
                 Berkeley) using ZAP-cDNA synthesis kit
and Superscript II RT (Life Technolog
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Plate: LLCM259 row: g column: 16
Pigh quality sequence stop: 504.
Location/Qualifiers
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Tissue Procurement: ATCC
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                     /note="Organ: uTerus; Vector: pOTB7; Site_1: XhoI; Site_2 EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
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                                                                                                                                                                                                                                                                                                                                   /tissue_type="endometrium, adenocarcinoma cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_44"
                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
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LysThrTrpGlyGlnTyrTrpAlaVal

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UI-E-CI1-aft-a-17-0-UI.rl UI-E-CI1 Homo sapiens cDNA clone
UI-E-CI1-aft-a-17-0-UI 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Coordinated Laboratory for Computational Genomics University of Iowa 375 Newton Road , 4156 MEBRF, Iowa City, IA 5224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genetics (www.resgen.com).
Seq primer: M13 Reverse.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Fax: 319 335 9565
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naldo, M.F., Lennon, G. and Soares, M.B.
                                                                                                                                                                                                                                                                                    93
                                                                                                                                                                                                                                                                                                                                                modified polylinker; Site 1: Ecor I; Site 2: Not I; UI-E-CII is a normalized cDNA library containing the following tissue(s): RPE and Choroid. The library was constructed according to Bonaldo; Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was ligated to an EcoR I adaptor, digested with Not I, and cloned directionally into pT773-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT)18 tail. The sequence tag for this library is ACCTA. This library was created for the program, Gene Discovery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="RPE and Choroid"
/dev stage="adult"
/lab_host="DH10B (Life Technologies) (T1 phage resistant)"
/clone lib="UI-B-CI1"
/note="Organ: eye; Vector: pT7T3-Pac (pharmacia) with a
                                                                                                                                                                                                                                                                                                          in the Visual System, (NEI)."
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/db_xref="taxon:9606"
/clone="UI-E-CI1-aft-a-17-0-UI"
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Best Local Similarity:
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mRNA sequence.
BE276871
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601178433F1 NIH_MGC_20 Homo sapiens
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Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         found through the I.M.A.G.E. Consortium/LLNL at: image.llnl Plate: LLCM331 row: d column: 22 High quality sequence start: 2
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National Institutes of Health, Mammalian Gene Collection (MGC)
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1 (bases 1 to 515)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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601300882F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635301 5',
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Clone distribution: MGC clone distribution information can
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//clone="IMAGE:335301"
//tissue_type="choriocarcinoma"
/lab_host="DH10B (phage-resistant)"
/lab_host="DH10B (phage-resistant)"
/clone lib="NIH MGC 21"
/clone lib="NIH MGC 21"
/note="Organ: placenta; Vector: pOTB7; Site_1: XhoI;
/site_2: EcoRI; cDNA made by oligo-dT priming.
Site_2: EcoRI; cDNA made by oligo-dT priming.
Site_selected vector: poTB7; Site_selected vector: potential vector of caracteristics of caracteristi
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db_xref="taxon:9606"
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High quality sequence stop: 523.
                    Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                          601155392F1 NIH_MGC_21
                                                                                            1 (bases 1 to 531)
NIH-MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian
                                                                                                                                                       Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                Homo sapiens
                                                                             Unpublished
                                                                                                                                                                                                                  Homo sapiens (human)
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                                                                                                                                                                                                                                                                                          mRNA sequence.
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NIH-MGC http://mgc.nci.nih.gov/
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="melanotic melanoma"
/lab host="DH10B (phage-resistant)"
/clome lib="NH10B (phage-resistant)"
/clome lib="NH1MGC_20"
/note="Organ: skin; Vector: pOTB7; Site 1: XhoI; Site 2:
ECORI; CDNA made by oligo-dT priming. Directionally
cloned into ECORI/XhoI sites using the following 5'
adaptor: GGCACGAG(G). Size-selected >500bp for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-CDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
Library Preparation: Ling Hong/Rubin Laboratory
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117 c
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/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80.3
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91.38%
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                                                                                                                                                                                                                                                                                                              531 bp mRNA linear EST 13-JI
Homo sapiens cDNA clone IMAGE:3138863
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                                                                                                Gene Collection (MGC)
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Best Local Similarity:
Query Match:
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                                                                                                                                                                      CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov Plate: LLCM337 row: b column: 09
                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 546)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601303333F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3637544 5',
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DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
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                                                                                                                                                      quality sequence stop: 543
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Site 2: ECORI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."

a 170 c 143 g 116 t
                                  /mol_type="mxwa
/db_xref="taxon:9606"
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/db_xref="taxon:9606"
tissue_type="choriocarcinoma"
                    /clone="IMAGE:3637544"
                                                               organism="Homo sapiens'
                                                                                                                             location/Qualifiers
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tissue_type="choriocarcinoma"
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clone_lib="NIH_MGC_21"
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CA397722
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CA397722 577 bp mRNA linear EST 06-NOV-2002 cs94g12.yl Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs Homo sapiens cDNA clone cs94g12
                                                                                                                                                                                                                                                                                                                                 Email: graeme@helix.nih.gov
Plate: 94 row: g column: 12
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Section on Molecular Structure and Function National Eye Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                   Tel: 301 402 3452 Fax: 301 496 0078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Wistow G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/clone lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified); cs" (Un-normalized, unamplified); cs" Spe; Vector: pCMVSPORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone lib="NIH_MGC_21"
/clone lib="NIH_MGC_21"
/note="Organ: placenta; Vector: pOTB7; Site 1: XhoI;
Site 2: ECGRI; cDNA made by oligo-dT priming.
Birectionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACCAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Supersority II RT (Life Technologies)."

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                                                                                                                                           /dev_stage="Adult"
/lab_host="EMDH10B"
                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
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/clone lib="NIH MGC 21"
                                                                                                                                                                                       tissue_type="RPE/choroid"
                                                                                                                                                                                                                  db_xref="taxon:9606"
clone="cs94g12"
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Matches:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (Dases 1 to 585)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601156355F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139788 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                         Plate: LLCM106 row: n column Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
cound through the I.M.A.G.B. Consortium/LLNL at: image.llnl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (
                           144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
               /tissue_type="choriocarcinoma"
/lab host="DH10B (phage-resistant)"
/clone_lb="NH10B (phage-resistant)"
/clone_lb="NH1MGC_21"
/note="Organ: placenta; Vector: pOTB7; Site_1: XhoI;
/note="Gorgan: placenta; Vector: pOTB7; Site_susing.
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the following 5; adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
44 a 137 c 171 g 133 t
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Ahtp://www.invitrogen.com/>). The library code designation was cs. For this library, CDNA inserts were cloned into the NotI/MluI sites of the vector. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."
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                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:9606"
/clone="IMAGE:3139788"
                                                                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
'mol_type="mRNA"
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Alignment Scores: Pred. No.:

94.1

Length:

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RESULT 13
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Best Local Similarity:
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6826a07.yl Human Retinal pigment (Un-normalized, unamplified): cs
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Tel: 301 402 3452
Fax: 301 496 0078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Section on Molecular Structure and Function National Eye Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wistow,G., Bernstein,S.L., Wyatt,M.K., Farris,R.N., Behal,A., Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K. Expressed sequence tag analysis of human RPE/choroid for the NEIBank Project: Over 6000 non-redundant transcripts, novel genes
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CA392552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 smail: graeme@helix.nih.gov
Plate: 26 row: a column;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Wistow G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
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primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
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chttp://www.invitrogen.com/>). The library code
chttp://www.invitrogen.com/>). The library code
designation was cs. For this library, cDNA inserts were
cloned into the NotI/MluI sites of the vector. EST
analysis was performed on the unamplified library at the
NIH Intramural Sequencing Center (NISC)."

135 c 173 g 134 t
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                                                                                                                                                                                                                                                                                                                                                                                     clone="cs26a07"
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epithelium/choroid cDNA
Homo sapiens cDNA clone cs26a07
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: graeme@helix.nih.gov
Plate: 78 row: g column: 10
Seq primer: M13RP1 reverse primer (ABI).
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Expressed sequence tag analysis of human RPE/choroid for the NEIBank Project: Over 6000 non-redundant transcripts, novel genes
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1 (bases 1 to 587)
Wistow,G., Bernstein,S.L., Wyatt,M.K., Farris,R.N., Behal,A., Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K.
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Fax: 301 496 0078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and splice variants
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                                                                                                 essentially following the protocols of the SuperScript Plasmid System (Invitrogen Corp.

<a href="http://www.invitrogen.com/">http://www.invitrogen.com/</a>). The library code designation was cs. For this library, cDNA inserts were cloned into the NotI/MluI sites of the vector. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."

135 c 174 g 133 t
                                                                                                                                                                                                                                                                                                       /clone lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs"
(Un-normalized, unamplified): cs"
/note="Organ: Bye; Vector: pCMVSPORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA library in the pCMVSPORT6 vector was constructed at Life Technologies (Rockville, MD; now part of Invitrogen Corp),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="RPE/choroid"
/dev_stage="Adult"
/lab_host="EMDH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Homo sapiens"
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Percent Similarity:

94.5 53.00 88.89%

Length: Matches: Conservative:

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RESULT 16
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Tissue Procurement: ATCC/DCTD/DTP
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, M
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Plate: LLCM1712 row: f column: 12
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Clone distribution: MGC clone distribution information can
                                                        LysThrTrpGlyGlnTyrTrpAlaVal 9
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/lab_host="DH10B (phage resistant)"
/clone lib="MIH MCC 49"
/clone lib="MIH MCC 49"
/note="Organ: skin; Vector: pOTB7; Site 1: XhoI; Site 2:
ECORI; cDNA made by oligo-dT priming Directionally cloned
into ECORI/XhoI sites using the following 5' adaptor:
GGCACGAG(G). Size-selected >500bp for average insert size
1.8kb. Library constructed by Ling Hong in the laboratory
of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
II RT (Life Technologies). Note: this is a NIH_MGC
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4858379"
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Best Local Similarity:
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                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 603)
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BG767860.1 GI:14078513
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602741357F1 NIH_MGC_49 Homo sapiens cDNA clone IMAGE:4870935
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Tissue Procurement: DCTD/DTP
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
NIH-MGC http://mgc.nci.nih.gov/.
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601573227F1 NIH_MGC_9 Homo sapiens
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/lab host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_9"
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/db_xref="taxon:9606"
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cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: image.llnl. Plate: LLCM275 row: j column: 08
                                                                                                                                   Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
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National Institutes of Health, M
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BE384038
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Tissue Procurement: ATCC/DCTD/DTP
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Clone distribution: MGC clone distribution information can be
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/clone_lib="NH1 MCC_49"
/clone_lib="NH1 MCC_49"
/note="Organ: skin; Vector: pOTB7; Site_1: XhoI; Site_2:
REORI; cDNA made by oligo-dT priming Directionally cloned
into EcoRI/XhoI sites using the following 5' adaptor:
GGCACGAG(G). Size-selected >500bp for average insert size
1.8kb. Library constructed by Ling Hong in the laboratory
of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
II RT (Life Technologies). Note: this is a NIH_MGC
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/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                     cDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLCM1712 row: a column: 15
High quality sequence stop: 605.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 605)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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EST.
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602718257F1 NIH_MGC_49 Homo sapiens cDNA clone
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/clome_lib="NIH MGC_20"
/clome_lib="NIH MGC_20"
/clome_lib="NIH MGC_20"
/clome_lib="NIH MGC_20"
/clomed_into_ECRI/XhoI sites using the following 5/
cloned into ECRI/XhoI sites using the following 5/
adaptor: GGCACGAG(G). Size-selected >500bp for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Bezkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
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/tissue_type="melanotic melanoma, high MDR (cell line)"
/lab host="DHIOB (phage-resistant)"
/clone_lib="NIH MGC_49"
/clone="Organ: skin; Vector: pOTB7; Site_1: xhoI; Site_2:
CCRI; cDNA made by oligo-dT priming. Directionally cloned
                                                                                                                                                         organism="Homo sapiens"
/mol_type="mRNA"
                                                                                           /clone="IMAGE:4858262"
/tissue_type="melanotic melanoma,
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CA397065
                                                                                                                                                                                                                                                                                                                                                                                        Email: graeme@helix.nih.gov
Plate: 85 row: f column:
Seq primer: M13RP1 reverse
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: 301 402 3452
Fax: 301 496 0078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              National Eye Institute 6/331, NIH, Bethesda, 1
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primer: M13RP1 reverse primer (ABI).
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                                                             /clone_lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified); cs" (Un-normalized, unamplified); cs" /note="Organ: Eye; Vector: pCMVSPORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA, and 7 ug of mRNA. A directionally cloned cDNA of total RNA and 7 ug of mRNA. A directionally cloned cDNA
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                      library in the pCMVSPORT6 vector was constructed at Life Technologies (Rockville, MD; now part of Invitrogen Corp)
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/dev_stage="Adult"
/lab_host="EMDH10B"
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/clone="cs85f10"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: bento-soares@uiowa.edu
Tissue Procurement: Dr. Gregg Hageman
CDNA Library preparation: Dr. M. Bento Soares, Univeristy of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa
DNA Sequencing by: Dr. M. Bento Soares, Univeristy of Iowa
Clone Distribution: Researchers may obtain clones from Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Coordinated Laboratory for Computational Genomics University of Iowa 375 Newton Road , 4156 MEBRF, Iowa City, IA 5224 Tel: 319 335 8250 Fax: 319 335 9565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BM722309 606 bp mRNA linear EST 01
UI-E-EO0-ahx-c-18-0-UI.rl UI-E-EO0 Homo sapiens cDNA clone
UI-E-EO0-ahx-c-18-0-UI 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Soares, MB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8889548
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1 (bases 1 to 606)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/note=Torgan: eye; Vector: pT7T3-Pac (Pharmacia) with a modified polylinker; Site 1: EcoR I; Site 2: Not I; UT-E-EOO is a cDNA library containing the following tissue(s): fetal eye. The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <http://www.invitrogen.com/>). The library code
designation was cs. For this library, cDNA inserts were
cloned into the NotI/MluI sites of the vector. EST
analysis was performed on the unamplified library at the
NIH Intramural Sequencing Center (NISC)."
188 c 162 g 133 t
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                                                                                                                                                                                       (clone="UI-E-E00-ahx-c-18-0-UI"
//tissue_type="fetal eye"
/dev_stage="fetal"
/lab_host="DH10B (Life Technologies) (T1 phage resistant)"
                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                      organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                      clone_lib="UI-E-E00"
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RESULT 22
CA397499
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Best Local Similarity:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wistow,G., Bernstein,S.L., Wyatt,M.K., Farris,R.N., Behal,A. Touchman,J.W., Bouffard,G., Smith,D. and Peterson,K. Expressed sequence tag analysis of human RPE/choroid for the NEIBank Project: Over 6000 non-redundant transcripts, novel
                                                                                                                                                                                                                                                                                                                                                           Seq primer: M13RP1 reverse primer (ABI)...
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Section on Molecular Structure and Funct National Eye Institute (6/331, NIH, Bethesda, MD 20892-2740, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CA397499 611 bp mRNA linear EST 06-NOV-2 cs91h07.yl Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs Homo sapiens cDNA clone cs91h07
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                                                                                                                                                                                                                                                                                                                                                                                                          Email: graeme@helix.nih.gov
Plate: 91 row: h column: (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Wistow G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and splice variants
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301 496 0078
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                /Clone lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs"
(note="Organ: Eye, Vector: pcMVSPORT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA library in the pcMVSPORT6 vector was constructed at Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              with Not I, and cloned directionally into pTyT3-Pac vector. The oligonucleotide used to prime the synthesis of first-strand cDNA contains a library tag sequence that is located between the Not I site and the (dT). B tail. The sequence tag for this library is CGCGTATACC. This library was created for the program, Gene Discovery in the Visual System, supported by National Eye Institute (NEI)."
Technologies (Rockville, MD; now part of Invitrogen Corp)
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Eutheria; Primates;
                                                                                                                                                                             /tissue_type="RPE/choroid"
/dev_stage="Adult"
/lab_host="EMDH10B"
                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLCM249 row: e column: 08
High quality sequence stop: 560.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, I
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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BE389689.1 GI:9335054
EST
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (
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- http://www.invitrogen.com/>). The library code designation was cs. For this library, cDNA inserts were cloned into the Notl/MluI sites of the vector. EST analysis was performed on the unamplified library at the NIH Intramural Sequencing Center (NISC)."

146 c 178 g 143 t
                                                                                                                                                              /tissue_type="endometrium, adenocarcinoma cell line"
/lab host="DH10B (phage-resistant)"
/clone lib="NIH MGC 44"
/clone lib="NIH MGC 44"
/note="Organ: uTerus; Vector: pOTB7; Site_1: XhoI; Site_2:
EcoRI; cDNA made by oligo-dT priming. Directionally
cloned into EcoRI/XhoI sites using the following 5'
adaptor: GGCACGAG(G). Library constructed by Ling Hong
in the laboratory of Gerald M. Rubin (University of
                                                                                                                                                   California,
                                                                                                        (Stratagene)
149 c
                                                                                                                                                                                                                                                                                                                                            clone="IMAGE:3603823"
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619 bp mRNA linear EST 06-NOV-2:
cs75b02.yl Human Retinal pigment epithelium/choroid cDNA
(Un-normalized, unamplified): cs Homo sapiens cDNA clone cs75b02
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: graeme@helix.nih.gov
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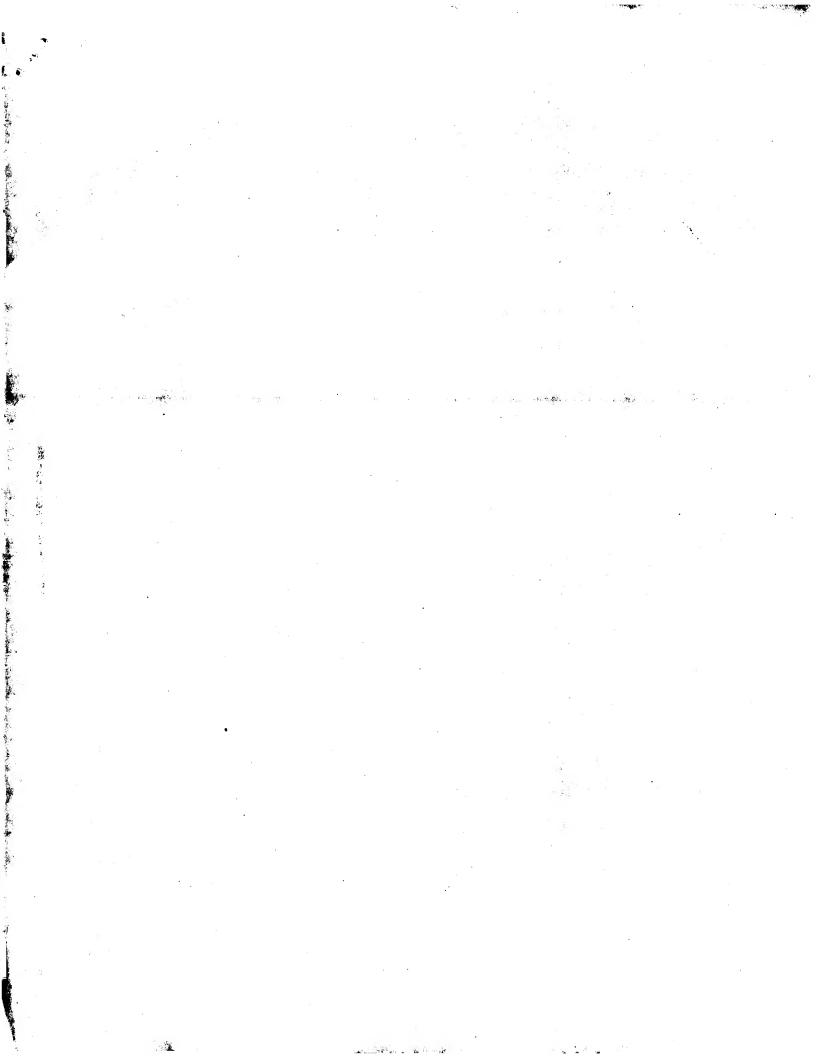
1 (bases 1 to 619)
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                                                                                                                               /Clone lib="Human Retinal pigment epithelium/choroid cDNA (Un-normalized, unamplified): cs"
/note="Organ: Eye; Vector: pcMVspoRT6; Two different donor eyes (75-80 years old) yielded approximately 600 mg of dissected RPE/choroid tissue. This in turn yielded 340 ug of total RNA and 7 ug of mRNA. A directionally cloned cDNA library in the pcMVspoRT6 vector was constructed at Life Technologies (Rockville, MD; now part of Invitrogen Corp), essentially following the protocols of the SuperScript Plasmid System (Invitrogen Corp. <a href="http://www.invitrogen.com/">http://www.invitrogen.com/</a>). The library code designation was cs. For this library, cDNA inserts were cloned into the NotI/Mlul sites of the vector. EST analysis was performed on the unamplified library at the NIT Intramural Sequencing Center (NISC)."
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/dev_stage="Adult"
/lab_host="EMDH10B"
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/mol_type="mRNA"
/db_xref="taxon:9606"
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Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.B. Consortium/LLNL at: image.llnl.gov
plate: LLCM275 row: p column: 22
High quality sequence stop: 622.
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BE384085
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Tissue Procurement: ATCC/DCTD/DTP
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/clone="IMAGE:3614085"
/clone="IMAGE:3614085"
/tissue_type="melanotic melanoma"
/tissue_type="melanotic melanoma"
/lab host="DH10B (phage-resistant)"
/clone lib="NIH MGC 20"
/clone lib="NIH MGC 20"
/note="Organ: skin; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Organ: skin; Vector: pOTB7; Site 1: XhoI; Site 2:
/note="Organ: skin; Vector: poTB7; Site 1: XhoI; Site 2:
/note="Organ: skin; Vector: poTB7; Site 1: XhoI; Site 2:
/note="Organ: skin; Vector: poTB7; Site 1: XhoI; Site 2:
/note="Organ: skin; Vector: poTB7; Site 1: XhoI; Site 2:
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/db_xref="taxon:9606"
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Search completed: August 24, Job time : 1903.5 secs

2003, 03:57:09



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1. /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*

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gp100/Pmel17 synth
PMEL 17 (GP100) pr
Melanoma-associate
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Tumour antigen epi Immunogenic peptid	antig	Human gp100 protei	ass I	Human Gp100 class	Human gp100 (154-1	Melanoma specific	Exemplary antigen	Human melanoma gpl	MHC class-I associ	0 Pmell 17	В	Human Pmel 17 (GP1		immunoger	melanoma	-Pmel-117	gp100(Pmel117) tum	associa	gp100-Pmel117 anti	Human leukocyte an	Tumour associated	Human gp100 Pmell1	Antigenic peptide	Cytotoxic T lympho		88	ξ.	Exemplary antigeni	Œ	Ø			meland	Tumour antigenic p

ALIGNMENTS

RESULT 1

AAW4	
ij	AAW45771 standard; peptide; 9 AA.
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АC	AAW45771;
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ΤŢ	22-JUN-1998 (first entry)
X	
DE.	Melanoma associated peptide analogue #2.
X	
ΚW	Metastatic melanoma; peptide analogue; vaccine; cancer; diagno
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SO	Synthetic.
SO	Homo sapiens.
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ΡN	WO9802538-A1.
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В	22-JAN-1998.
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PF	08-JUL-1997; 97WO-EP03712.
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PR	11-JUL-1996; 96EP-0201945.
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PA	(ALKU) AKZO NOBEL NV.
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ΡI	Adema GJ, Figdor CG;
×	
DR	WPI; 1998-110586/10.
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j 10	Melanoma associated peptide analogues - userul in vaccines aga
F.	meianoma

Melanoma associate

Melanoma associated peptide analogues - useful in vaccines against melanoma

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RESULT 2
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14-MAR-2001; 2001DK-0000436.

14-MAR-2001; 2001DK-0000441.

14-MAR-2001; 2001US-275447P.

14-MAR-2001; 2001US-275448P.

14-MAR-2001; 2001US-275470P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MHC; major histocompatability complex; human; cytostatic; anti-HIV; antiinflammatory; dermatological; antiasthmatic; antidiabetic; virucide antiarteriosclerotic; antiulcer; antirheumatic; antiarthritic; AIDS; antipsoriatic; immunosuppressive; inflammatory bowel disease; measles; Crohn's disease; ulcerative colitis; sclerosis; type I diabetes; pox; rheumatoid arthritis; psoriasis; atopic dermatitis; asthma; chicken pox malignant melanoma; carcinoma; cancer; leukaemia; lymphoma; hepatitis;
                                  New Major Histocompatibility Complex (MHC) molecule construct, for treating, preventing, stabilizing or alleviating a disease involving MHC recognizing cells e.g., cancer
                                                                                                                                                                                                                      Winther L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-MAR-2002;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This invention relates to a new Major Histocompatibility Complex (MHC) molecule construct comprising a carrier molecule to which one or more MHC molecules are attached either directly or via one or more entities. The construct of the invention may have cycostatic, antiinflammatory, dermatological, antiasthmatic, antidiabetic, anti-HIV, virucide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                 Melanoma associated antigen gp100\, - used in vaccines and for detection of tumours
                                                                                                                                                                                                                                                                                                                                                           21-DEC-1994;
16-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Melanoma; antigen; vaccine; immunogen; primer; probe; detection; identification; tumour; gp100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Immunogenic peptide of melanoma associated antigen gp100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-JAN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAR78644;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cancer, leukaemia, cutaneous lymphoma, hepatic carcinoma, colorectal cancer, bladder cancer, rejection-related disease, Graft-versus-host-related disease, or a viral disease associated with hepatitis, Acquired Immunodeficiency Syndrome (AIDS), measles, pox, chicken pox, rubella or herpes. The MHC molecule construct is also useful for flow cytometry, histology or cytology. The present sequence represents a peptide used to create the MHC molecule construct of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-AUG-1995
                                                                                                                                                                                                                                                                                              (ALKU ) AKZO NOBEL NV
                                                                                                                            1995-284790/38.
DB; AAQ96055.
                                                                                                                                                                                                                              GJ, Figdor CG
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8; Conserv
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94EP-0200337.
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.3e+05;
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Best Local :
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Best Local
                                                                                                              The peptide epitope AAW77119-W77138 were created for human tumour specific cytotoxic T lymphocyte response. These peptides are are cysteine- depleted mutants of a native disease-specific CTL epitope. The cysteine- depleted CTL epitopes elicit a stronger or more specific CTL response than the native epitope. The epitopes can be used in a disease-specific immunogen to protect a mammal against disease in particular melanomas. The peptides may also be used to screen a sample for the presence of an antigen with the same epitope, or with a different
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunogenic peptides derived from the melanoma associated antigen (See AR78639-45) may be used in the production of vaccines. Nucleotide sequences encoding the immunogenic peptides may be used as primers and probes in the detection of melanoma cells. Tumour infiltrating lymphocytes capable of binding to the melanoma associated antigen can be cultured ex vivo and returned to melanoma associated, and when radiolabelled, they may be used to identify
                                                                                                                                                                                                                                                                                                                                                                                                              29-JAN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tyrosinase; cytotoxic T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gp100/Pmel17
                                                                                                      cross-reactive epitope.
                                                                                                                                                                                                                                     Disclosure; Page 27; 93pp; English
                                                                                                                                                                                                                                                              Disease specific immunogen - comprises disease specific cytotoxic Tlymphocyte epitope used to elicit melanoma specific CTL response
                                                                                                                                                                                                                                                                                                        WPI; 1998-437388/37
                                                                                                                                                                                                                                                                                                                                  Engelhard VH,
                                                                                                                                                                                                                                                                                                                                                                                       30-JAN-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW77119;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 5;
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                        Similarity
8; Conserv
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KTWGQYWAV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KIWGQYWAV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 31; 40pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     e; tyrosinase cytotoxic lymphocyte response; T lymphocyte; cysteine-depleted; melanoma.
                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9 AA;
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                          Conservative
                                                                             ΑĄ,
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88.9%;
                                     91.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide epitope 1.
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                       Score 53; DB
Pred. No. 9.3e
0; Mismatches
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Pred. No. 9.3e
0; Mismatches
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                                    DB 19;
9.3e+05;
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9.3e+05
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                                                 Length 9;
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KTWGQYWAV 9

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RESULT 5
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ID AAW7
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                                                                                which are closed circles) or circular plasmid DNA (at least 50% of which are supercoiled). Also described is a MP of at most 20 microns in chief control sequence operatively linked to a coding sequence, where the coding sequence encodes an expression product selected from: (1) a coding sequence of: (1) a fragment of a naturally-occurring mammalian crotein; or (ii) a fragment of a naturally-occurring protein from an infectious agent which infects a mammal; (2) a peptide having a length can sequence which permits it to bind to an MHC class I or II molecule; and (3) the polypeptide or the peptide linked to a trafficking sequence. AAM69763 to AAW69765, and AAW78793 to AAW78897 are peptide fragments for the delivery of polymuclectides into phagocytic cells. They can be used for gene therapy, e.g. for treating genetic diseases, infections or to downregulating an immune response.
Matches
            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                 microparticles having a diameter of less than 100 mu m. The MP comprises: (a) a polymeric matrix (PM) consisting of one or more synthetic polymers having a solubility in water of less that 1 mg/l, and (b) an expression vector selected from RNA molecules (at least 50% of
                                                                                                                                                                                                                                                                                                                                                                                                                                                         New preparations of microparticles matrix and nucleic acid comprising gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Microparticle; delivery; polymeric matrix; autoantigen; tumour antigen; class II associated peptide; pathogen; gene therapy; genetic disease; infection; downregulation; immune response.
                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW78850;
                                                                                                                                                                                                                                                                                                                                                                                               A microparticle preparation (MP) has been developed, consisting
                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 10; 101pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1998-427556/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Curley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JAN-1998;
22-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-JAN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-NOV-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (PANG-) PANGAEA PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 KTWGQYWQV 9
8
            Similarity
                                                          9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hedley ML,
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
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97US-0787547.
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            91.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Langer RS,
٥,
            Score 53; I
Pred. No. 9.
Mismatches

    comprising a synthetic polymer
an expression vector for use in

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lunsford LB
            DB 19;
9.3e+05;
                          Length 9;
Indels
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RESULT 6
AAW70010
ID AAW7
AX Cyto
CYto
KW Cyto
KW huma
KW anti
KW vira
KW Fung
OS Homo
XX WO98
AX WO98
AX WO98
AX WO98
AX WO98
AX O6-A
PD 06-A
PD 16-A
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                                                                                                                                                                                                                                                                                                                       Sequences shown in AAW70010 to AAW70026 represent peptides derived from CC melanoma-associated antigen gp100 that can bind to a human leukocyte CC antigen (HLA), HLA-A2.1. The peptides are used to exemplify the method CC of invention of producing antigen-specific cytotoxic T cells (CTLs) in CC vitro. The method comprises contacting immunogenic peptides from an CC antigen that binds class I major histocompatibility complex (MHC) CC molecules with antigen presenting cells (APCs) pretreated with CC pretreatment growth factors, and incubating the APCs with purified CD8 CC cells in the presence of at least 2 incubating treatment factors, thereby producing antigen-specific CTLs. A method for specifically killing CC target cells in a human patient is also provided which comprises CC obtaining a fluid sample containing CTLs from a patient, contacting the CC staining a fluid sample containing CTLs from a patient, contacting the CC obtaining a fluid sample containing CTLs from a patient growth CC activated CTLs which are contacted with pre-treatment growth CC activated CTLs which are contacted with a carrier to form a composition. CC The composition can then be administered to the patient. The activated CTLs can be used for treating cancers, immune disorders, vital infections, AIDS, hepatitis, bacterial infection, fungal infection,
                                                                                                                      Matches
                                                                                                                                                Query Match
Best Local (
                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 4; Page 62; 104pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Production of antigen-specific cytotoxic T cells - by incubating immunogenic peptide(s) from antigen that binds class I major histocompatibility complex molecules with pre-treated antigen presenting cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1998-437445/37
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
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antigen presenting cell; APC; immu
viral infection; AIDS; hepatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cytotoxic T lymphocyte; CTL; major histocompatibility complex; MHC; human leukocyte antigen; HLA; tumour associated antigen; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Melanoma-associated
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                                                                                                                   Similarity
8; Conserv
                                                                                                                                                                                                                                                                                                       or tuberculosis.
                                             KTWGQYWAV
KTWGQYWQV 9
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                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sidney J,
                                                                                                                                                91.4%;
                                                                                                                Score 53; DB
Pred. No. 9.3e
0; Mismatches
                                                                                                                   ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gp100 derived HLA-A2.1 binding peptide 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tumour associated antigen; cancer;
immunogenic peptide; immune disorder;
tis; bacterial infection; malaria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Southwood S,
                                                                                                                                                9.3e+05;
                                                                                                                                                                             DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tsai
                                                                                                                                                                          Length 9;
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                                                                                                                   Indels
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RESULT 8
AAW45777
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AAW54598
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                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                      The peptides AAW54559-W54809 are examples of peptides to which at least 1 (preferably 2) mannose can be attached to increase their uptake as antigens by antigen-presenting cells. Uptake of agonist mannosylated peptides will increase the T cell response, whereas uptake of antagonist peptides blocks the T cell response. Blocking binding of immunogenic autoantigens can be used in treatment of type I diabetes, rheumatoid arthritis, graft rejection etc., also to induce T-cell non-responseiveness. Vaccines containing mannosylated antigen are used to response to the foreign by a parterial virtues of the foreign by
                                                                                                                                                      AAW45777 standard; peptide;
                                                                                                                                                                                                                                                                                                                         Sequence
                                   Metastatic melanoma; peptide analogue; vaccine; cancer; diagnosis; antigen; CTL; immunogenic; viral disease.
                                                                                                    22-JUN-1998
                                                                                                                             AAW45777;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Increasing uptake and presentation of antigen(s) - by
residue(s) to antigen for increasing T cell response,
e.g. vaccines against viral infection(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW54598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW54598 standard; peptide; 9
                                                                         Melanoma associated peptide analogue #8.
                                                                                                                                                                                                                                                                                                                                                               prevent or treat infections by, e.g. bacteria, viruses, fungi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-230631/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drijfhout JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-SEP-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9813378-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vaccine; treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mannose;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide 3 from gp 100/Pmel-17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYLE-) RIJKSUNIV LEIDEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-SEP-1997;
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                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                               KTWGQYWAV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antigen; antigen-presenting cell; mannosylated peptide; T cell;
                                                                                                                                                                                                                     KTWGQYWQV
                                                                                                                                                                                                                                                                                                                         9 AA
                                                                                                                                                                                                                                                                         Conservative
                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Koning
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                                                                                                                                                                                                                                                                                  91.4%;
88.9%;
                                                                                                                                                      9
                                                                                                                                                                                                                                                                     Score 53; DB 19;
Pred. No. 9.3e+05;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mannose
                                                                                                                                                                                                                                                                                                                                                                 helminths
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Homo sapiens

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RESULT 9
AAW45770
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence represents a specifically claimed example of a novel peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide, mucleotide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive cumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.
          Adema GJ,
                                                         11-JUL-1996;
                                                                                 08-JUL-1997;
                                                                                                            22-JAN-1998.
                                                                                                                                  WO9802538-A1
                                                                                                                                                                        Synthetic
                                                                                                                                                                                               Metastatic melanoma; peptide analogue; vaccine; cancer; diagnosis; antigen; CTL; immunogenic; viral disease.
                                                                                                                                                                                                                                      Melanoma associated
                                                                                                                                                                                                                                                               22-JUN-1998
                                                                                                                                                                                                                                                                                        AAW45770
                                                                                                                                                                                                                                                                                                             AAW45770 standard; peptide; 9 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 4; Page 35; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Melanoma associated peptide analogues - useful in vaccines against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1998-110586/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Adema GJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-JUL-1996;
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                                  (ALKU ) AKZO NOBEL NV
                                                                                                                                                           sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                               8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                   KTWGQYWAV
                                                                                                                                                                                                                                                                                                                                                                              KVWGQYWAV
          Figdor CG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Figdor CG;
                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ä
                                                                                                                                                                                                                                                               (first entry)
                                                           96EP-0201945
                                                                                   97WO-EP03712.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97WO-EP03712
                                                                                                                                                                                                                                     peptide analogue #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                          91.4%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                               Score 53; DB
Pred. No. 9.3e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 19;
9.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
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RESULT 10
AAY49663
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Best Local S
Matches
                                                                                                                                                                                                                    15-APR-1998;
27-JUL-1998;
30-OCT-1998;
30-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide, which is immunogenic with lymphocytes directed against metastatic melanomas. It is characterised in that it comprises at least a part of the following sequence, where the amino acid at position 2 or 8 is substituted: Lys-Thr-Try-Gly-Gln-Tyr-Try-Gln-Val. Vaccines comprising the peptide, an epitope of the peptide, nucleotide sequence encoding the peptide, or an antigen presenting cell preloaded with the peptide or antibody as above, are useful for cancer, particularly melanoma, treatment. The peptides can also be used to generate antigen reactive tumour infiltrating lymphocytes, which can also be used in vaccines. The peptides can be exploited to elicit native epitope-reactive CTL. Usage of the peptides with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                Human; sdph3.10; SAGE; sdp3.8; HAGE; sdp3.5; TRAP; sarcoma; tumour rejection antigen precursor; tumour associated nucleic acid; carcinoma; cancer; immune response; diagnosis.
                                                                                New nucleic acid encoding sarcoma-associated gene products, useful for diagnosing, e.g. treating and preventing cancer
                                                                                                                                                          Martelange V,
                                                                                                                                                                                                                                                                                                                          21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                       WO9953061-A2
                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tumour antigenic peptide SEQ ID NO:30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY49663 standard; peptide; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This sequence represents a specifically claimed example of a novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Melanoma associated peptide analogues - useful in vaccines against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1998-110586/10
                                                                                                                               WPI; 1999-620430/53.
                                                                                                                                                                                                                                                                                            14-APR-1999;
                                                                                                                                                                                       (LUDW-) LUDWIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KTWGQYWAV 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Figure 1; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                    98US-0060706.
98US-0122989.
98US-0183706.
98US-0183789.
                                                                                                                                                          De Smet C,
                                                                                                                                                                                       INST CANCER RES
                                                                                                                                                                                                                                                                                            99WO-US08163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91.4%;
88.9%;
                                                                                                                                                          Boon-Falleur T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 53; DB 19;
Pred. No. 9.3e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 9;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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The present invention describes sarcoma-associated gene products (I) Agents, specifically sarcoma associated nucleic acids (II) or their expression products that are tumour rejection antigens (TRA), that

Page 25; 93pp;

English.

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RESULT 11
AAY53524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complexes are used for treating cancer, especially sarcoma and carcinoma, in humans and other animals. Compositions containing autologous cytolytic T cells (CTL), specific for the HLA/(I) complex, are similarly useful, also transformed cells that stimulate such CTL in vivo. (II) are also used: (i) as source of therapeutic antisense sequences that reduce expression of (II); (ii) for recombinant production of (I); (iii) particularly its fragments, as primers and production of (I); (iii) particularly its fragments, as primers and prophes in usual hybridisation and amplification assays, for diagnosis, prognosis and monitoring of tumours, or for measuring binding specificity of HLA molecules or CTL clones; (iv) to identify related sequences; and (v) for generating transgenic animals, e.g. for studying cancer and immune responses to it. (I) are used to raise specific antibodies (Ab) and therapeutically. Ab are used to diagnose tumours in immunoassays, also for delivering drugs, toxins, imaging agents etc. to (I)-expressing cells. ANY49637 to ANY49670 represent exemplary tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                        (INRM )
(CNRS )
(INSP )
                                                            New lipopeptide containing lipid regions separated by peptide spacers that impart
                                                                                                                         WPI; 1999-583113/50
                                                                                                                                                                                                                                                                                        07-APR-1998;
                                                                                                                                                                                                                                                                                                                               07-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                       08-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY53524 standard;
                                                                                                                                                                Le Gal
                                                                                                                                                                                                                                                                                                                                                                                                             FR2776926-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             melanoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    electrical charge;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lipopeptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antigenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  selectively increase formation of HLA (human leucocyte antigen)/(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunodeficiency virus; hepatitis
                                                                                                                                                                                                      INSERM INST NAT SANTE & CORS CENT NAT RECH SCI. INST PASTEUR LILLE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9 AA;
    Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                Guillet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     epitope; cytotoxic T lymphocyte; CTL; lipid; spacer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                        98FR-0004323.
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    24;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hydrophilicity; vaccine;
                                                                                                                                                              JG,
35pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
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                                                                                                                                                                Gahery
      French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (aa 154-162) binds HLA-A2
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                                                                                                                                                                                                                                                RECH
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                                                                                                                                                                  Gras
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                                                              and two epitopes, all hydrophilicity, useful
                                                                                                                                                                MH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         e; immune response; HIV;
virus; papilloma virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20;
                                                                                                                                                                Melnyk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 9;
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                                                                                                                                                                Tartar A;
                                                                                   al1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         studying
                                                                  in
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The invention relates to the generation of a lipopeptide comprising at least one auxiliary T epitope, at least one cytotoxic T lymphocyte (CTI epitope and at least one lipid residue with (i) the epitopes and lipid portion and (ii) the epitopes, being separated independently by peptide

peptide

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RESULT 12
AAY47616
ID AAY47
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CC AAY45390 to AAY48214 represent specifically claimed immunogenic peptides CC having a human major histocompatibility complex (MHC) Class I (also CC known as human leukocyte antigen (HLA) binding motif. The immunogenic peptides can bind to a specific HLA allele (i.e. HLA-A subtypes CC HLA-A2.1, A1, A3.2 or A24.1 or HLA-B or C) and induce a cytotoxic T cell cresponse against the antigen from which the peptide is derived. CC cytotoxic T lymphocytes (CTLs) which destroy antigen-bearing cells are CC cormally induced by an antigen in the form of a peptide fragment bound CC to a HLA molecule, rather than the intact foreign antigen itself, and CC are particularly important in tumour rejection and in fighting viral infections. The peptides are therefore useful therapeutically to treat CC or prevent viral infections and cancers in mammals (especially humans) CC e.g. prostate cancer, hepatitis B and C, AIDS, and renal carcinoma. CC They can be administered as vaccines to elicit an immune response in CC individuals susceptible or otherwise at risk of viral infection or cancer, or used to treat chronic or acute conditions. They are also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        immune response; T cell activation; major histocompatibility comp
cytotoxic T lymphocyte; CTL; tumour rejection; viral infection; c
prostate cancer; hepatitis B; hepatitis C; AIDS; renal carcinoma;
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Best Local
                  heterologous protein into a eukaryotic cell, comprising contacting the cell with a Y1 transformed with the above vector (Y1-EV1), (5) a method for inducing an immune response specific for a heterologous protein; (6) a method for inducing a cytotoxic T-lymphocyte (CTL) response specific for a heterologous protein; (7) a method for determining the efficacy of an antigen vaccination regimen in a subject. Y1 is used to treat a pathological disorder, by providing recombinant Yersinia for the safe delivery of proteins into eukaryotic cells. AAY33147-Y33178 are
                                                                                                                                                                                                                 enterocolitica yopEHOMP or Yersinia pseudotuberculosis yopEHAOJ; (2) an expression vector (EVI) for delivering a heterologous protein into a eukaryotic cell, comprising in the 5'-3' direction; (3) a Yersinia or mutant Yersinia strain for delivering a heterologous protein into a eukaryotic cell, comprising contacting the cell with a Y1 transformed with the above vector (Y1-EVI); (4) a method for delivering a with the above vector (Y1-EVI); (4) a method for delivering a with the above vector (Y1-EVI); (4) a method for delivering a method for delivering a with the above vector (Y1-EVI); (4) a method for delivering a with the above vector (Y1-EVI); (4) a method for delivering a method for delivering a with the above vector (Y1-EVI); (4) a method for delivering a metho
                                                                                                                                                                                                                                                                                                                                                                           mutation(s) in effector-encoding gene(s) and deficient in the proof functional effector protein(s). The invention describes (1) a quintuple mutant Yersinia strain, having the designation Yersinia
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; protein delivery; Yersinia sp.; effector gene; mutant; antigen; immune response; cytotoxic T-lymphocyte; CTL; vaccination; treatment; pathological disorder; gp100-Pmell17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention describes a novel mutant Yersinia (Y1) strain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New mutant Yersinia strains useful
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                                                                             lipopeptide mimics the activity of IFNg. Compositions comprising the lipopeptide are used to treat or prevent any condition that responds to IFNg, and as adjuvant for vaccines (particularly those directed against tumors, viral or parasitic infections), to stimulate or (re)orient the immune response between types 1 and 2 cytokine profiles. Particular applications are treatment of infections (particularly viral, e.g. acquired immune deficiency syndrome, papilloma (cancer) and heparities, but also bacterial, fungal, parasitic or helminth); cancers (particularly of kidney, cutaneous T cells or ovary, chronic myelogenous leukemia or mesothelioma), allergy; and autoimmune
                                                                                                                                                                                                                                                                                                                                                                                  ANY40123-Y40379 represent epitopes that are able to activate cytotoxic T lymphocytes (CD8+ epitopes), T helper cells (CD4+ epitopes), om B epitopes recognized by corresponding antibodies. The epitopes may be used in the composition of the invention. The specification describes a lipopeptide that has a peptide part derived from mammalian interferon gamma (IFNg) and one or more lipophilic parts comprising a linear or branched, (un) saturated 4-20C hydrogarbyl chain or a steroid. The
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New lipopeptide comprising C-terminal interferon-gamma fragment with attached lipophilic groups, used as interferon mimic, e.g. for treating cancer or virus infection
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Pred. No. 9.3e+05;
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                                                                                                                                                                                                       microaggregates for inducing an immune response comprise: (a) a first lipopeptide comprising at least one CTL (cytotoxic T-lymphocyte) epitope and at least one lipid unit; and (b) a second lipopeptide comprising at least one HTL (helper T-lymphocyte) epitope and at least one lipid unit different from that of the first lipopeptide. This peptide represents an example of a lipopeptide epitope used in the invention and is derived from a human melanoma protein. The immunogenic lipopeptide micelles are used in vaccines, especially against HIV, hepatitis B virus (HBV), papilloma viruses, p53, melanoma or Plasmodium falciparum malaria.
AAY01753 standard; Peptide; 9 AA.
                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                           Immunogenic lipopeptide micelles - comprising lipopeptides
containing cytotoxic and helper T-lymphocyte epitopes
                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-349509/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-DEC-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Micelle; microaggregate; induction; immune response; lipopeptide; CTL; cytotoxic T-lymphocyte; epitope; lipid; helper T-lymphocyte; HTL; HBV; tetanus; toxin; vaccine; HTV; hepatitis B virus; papilloma virus; p53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Melanoma-derived lipopeptide epitope #8 for mixed micelles
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(INRM ) INSERM INST NAT SAN
(INSP ) INST PASTEUR LILLE.
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                                                                                                                                                                                                                                                                                                                                    invention relates to the generation of mixed micelles or
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INSERM INST NAT SANTE & RECH MEDICALE
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                                                                                                                                                                                9 AA;
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Wieruszeski JM;
                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                 Page 37; 60pp; French.
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                                                                                                                                      91.4%;
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                                                                                                                         Score 53; DB Pred. No. 9.3e 0; Mismatches
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9.3e+05;
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                                                                                                                                                                                             RESULT 17
AAY00715
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                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence represents an exemplary tumour associated peptide antigen. The specification describes a MAGE-3 tumour associated gene. Peptides (AAY01721-25) that bind human leucocyte antigen (HLA) Class II molecules can be derived from the MAGE-3 protein. These peptides and autologous CD4+ cells that bind to a complex of MAGE-3 peptide and HLA Class II, are used to treat MAGE-3 related disease, particularly cancers (e.g. melanoma, osteosarcoma, leukemia and particularly cancers (e.g. melanoma, osteosarcoma, leukemia and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MAGE-3; tumour associated gene; human leucocyte antigen Class II; autologous CD4+ cell; MAGE-3 related disease; cancer; melanoma; osteosarcoma; leukemia; carcinoma.
                        leukocyte antigen-presenting molecule; allograft rejection.
                                                                                                                                                                                                                                                                                                                                                                                                      various forms of carcinoma). The peptides are also used to produce specific antibodies. Detection of of the peptides, e.g. in binding assays, particularly with antibodies, is used for diagnosis of such
 Homo sapiens
                                                    Tumour antigen; booster peptide; immune response modulation; all immune response enhancer; tumour cell; tumour rejection antigen;
                                                                                                                                                      AAY00715;
                                                                                                                                                                               AAY00715 standard; peptide; 9
                                                                                                                                                                                                                                                                                                                                                                 Sequence
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Luiten R, Stroobant V, Thielemans
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Exemplary antigenic peptide derived from gp100(Pmell17)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-JUN-1999
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                                                                                           Tumour antigen booster peptide gp100Pmel117
                                                                                                                           12-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isolated peptides that bind to human leucocyte
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                                                                                                                                                                                                                                                                                                                                                                 9 AA;
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                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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                                                                                                                                                                                                                                                                                                                        91.4%;
88.9%;
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                                                                                                                                                                                                                                                                                                                        Score 53; DB 20;
Pred. No. 9.3e+05;
                                                                                                                                                                                                                                                                                                             Mismatches
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                                           autoimmune disease;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (A) inducing an immune response by: (i) administering a virus containing a nucleic acid molecule encoding the antigen or its precursor to generate an immune response; and (ii) administering at least one booster dose comprising a peptide including the antigen, in an adjuvant, in a combined amount effective to enhance the initial immune response; or (B) reducing an immune response as defined for (A) but using a non-adjuvant with the peptide which includes the antigen, in an amount effective to reduce the initial immune response. Method (A) is used to enhance the immune response against tumour cells expressing tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rejection antigens, and against pathogens in subjects having human leukocyte antigen-presenting molecules. Method (B) is used to reduce the immune response in allergy, autoimmune disease, and allograft rejection. Method (A) provides an immunisation method which, unlike prior art, is not limited by the host immune response against viral vectors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Immunization methods using viruses expressing antigen for priming and booster immunizations - useful for modulating immune responses against antigen, e.g. enhancing immune response against tumour cell expressing tumour rejection antigens
10-JUL-1998;
                              21-JAN-1999
                                                              WO9902183-A2
                                                                                                            Synthetic
                                                                                                                                            malignant
                                                                                                                                                        Cytotoxic T-lymphocyte response; CTL; antigen; lymphatic system; immunisation; tumour; infectious disease; immunotherapy; cancer;
                                                                                                                                                                                                         HLA Class I motif peptide SEQ ID NO:379
                                                                                                                                                                                                                                             12-MAY-1999
                                                                                                                                                                                                                                                                               AAY10449
                                                                                                                                                                                                                                                                                                            AAY10449 standard; Peptide; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence represents a tumour antigen booster peptide that can be used in the method of the invention. The method is for for modulating immune response in a mammal against an antigen, and comprises:

(a) inductor an immune response by: (i) administrating a virus contain.
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                                                                                                                                            immunisation; tumoun
malignant melanoma;
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98WO-US14289
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        91.4%;
88.9%;
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Pred. No. 9.3e+05;
0; Mismatches 1
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    induce an immunological CTL response in the mammal; and (b) maintaining the level of the antigen in the mammal's lymphatic system to maintain the immunologic CTL response. The method can be used for the delivery of e.g. a differentiation antigen, a tumour-specific multilineage antigen, an embryonic antigen, an oncogene antigen, a mutated tumour-suppressor gene antigen, or a viral antigen. They can be used for the treatment of disease such as cancer, e.g. malignant melanoma or infectious disease, e.g. viral disease such as hepatitis or AIDS. Sustained antigen delivery to the lymphatic system provides for potent CTL stimulation that takes place in the milieu of the lymphoid organ, and it sustains stimulation that is necessary to keep CTL active, cytotoxic and recirculating through the body. AAV10071 to AAV10639 represent examples of peptide
                                                                                                                                                                                                                                                                    Microparticle; nucleic acid delivery; immunogenic peptide; MHC I; MHC II; major histocompatibility complex; vaginal tissue; mucosal tissue..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes a method of inducing and/or sustaining an immunological cytotoxic T lymphocyte (CTL) response in a mammal. The method comprises: (a) delivering an antigen to the mammal at a level to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of antigen in the lymphatic system of a mammal so sustained CTL response, used to treat, e.g. AIDS
WPI; 2000-638130/61.
                                                                                           11-MAR-1999;
27-MAY-1999;
                                                                                                                                                                         14-SEP-2000
                                                                                                                                                                                                                                        Unidentified
                                                                                                                                                                                                                                                                                                                   MHC class I associated immunogenic peptide SEQ ID
                                                                                                                                                                                                                                                                                                                                                    26-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                    AAB33662;
                                                                                                                                                                                                                                                                                                                                                                                                                  AAB33662 standard; Peptide; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antigens given in the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 40; 199pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inducing a cytotoxic T lymphocyte response - by maintaining a level of antigen in the lymphatic system of a mammal so as to provide a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-120514/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-DEC-1997;
10-JUL-1997;
                            Lunsford LB,
                                                             (ZYCO-) ZYCOS INC.
                                                                                                                                         10-MAR-2000; 2000WO-US06578.
                                                                                                                                                                                                       WO200053161-A2
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                             Putnam
                                                                                           99US-0266463.
99US-0321346.
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97CA-2209815.
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                             Hedley
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Pred. No. 9.3e+05;
0; Mismatches 1
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                                                                                                                                                                                                                                                                                                                     61
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RESULT 20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptides. The peptides are examples of the expression products of the nucleotide sequences which can be included in the microparticles of the invention. Sequences AAB33711-B33716 represent alternative expression products and nuclear localisation signals also used in the invention microparticles are useful for administering a nucleic acid into the mucosal tissue preferably vaginal tissue of an animal.
Claim 7;
                                              Fused protein capable of inducing cellular immune response, vactive ingredient for drug compositions in preventing and/or infectious diseases such as malaria or cancer -
                                                                                                                                                    WPI; 2000-543748/49.
                                                                                                                                                                                                                                                                                                                                                      18-FEB-2000; 2000WO-JP00941.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immune response; infectious disease; malaria; cytotoxic T cell cytostatic; immunostimulant; cellular immune response inducer; protozoacide; leukaemia; cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cytotoxic T lymphocyte (CTL) epitope SEQ ID NO:31
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8; Conserv
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Page 58;
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72pp; Japanese
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Pred. No.
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9.3e+05;
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treating
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The present invention describes a fused protein (I) prepared from a peptide containing a CTL (cytotoxic T lymphocyte) epitope recognised by cytotoxic T cells and a protein containing the ATPase domain of a heat

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RESULT 21
AAB08694
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Best Local
                                                   AAB08668-B08704 represent antigenic peptides characteristic of tumours. The peptides may be combined in vaccines with a human EphA3 HLA (human leukoyte antigen) class II-binding peptide. EphA3 antigens, when presented by an antigen presenting cell having a HLA class II molecule, effectively induce activation and proliferation of CD4+T lymphocytes. EphA3 is a tumour associated gene. EphA3 HLA binding peptides are used for selectively enriching a population of T lymphocytes. The peptides are also used for diagnosing a disorder characterized by EphA3 or EphA3 HLA binding peptide expression. The peptides are also used to treat a disorder characterized by EphA3 expression. The EphA3 binding peptides are also used to treat a disorder characterized by EphA3 or EphA3 are useful in producing vaccines and antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            shock protein. Also described are: (1) a drug composition containing (1) as active ingredient; (2) a DNA encoding (1); (3) an expression vector containing the DNA of (2); and (4) a transformant which can retain the expression vector of (3). (1) has cytostatic, immunostimulant and protozoacide activities, and can be used as a cellular immune response inducer. The protein is useful as an active ingredient for drug compositions in preventing and/or treating infectious diseases such as malaria or cancer e.g. to provide systemic immunity against leukaemia. The present sequence represents a specifically claimed CTL epitope for use in a fused protein of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel tyrosine kinase receptor, EphA3 human leukocyte antigen (HLA) class II binding peptide and nucleic acid encoding the receptor, us for diagnosing and treating conditions characterized by expression of the conditions characterized by expression of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-FEB-1999;
08-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EphA3
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99US-0158566.
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Pred. No. 9.3e+05;
0; Mismatches 1
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                                                                                                                                               decapeptide sequences, that function as tumour rejection antigens (TRAS). These peptides are capable of forming a complex with major histocompatibility complex (MHC) molecule type HLA-A2.1 (Human Leucocyte Antigen), that are recognised by T-lymphocytes and elicit an immune response from cytolytic T-lymphocytes (CTL). They function as an immune response stimulator. Tumour rejection antigens are useful in prophylaxis, therapy and diagnosis of tumours and are effective in controlling or preventing tumour growth. The present sequence is the human gpl00 Pmell17 nonapeptide-1, that corresponds to residues 154-162 of the tumour associated gene, gpl00 Pmell17 encoding protein. It can be administered to induce or enhance an immune response and is presented by HLA-A2 complex. This peptide can serve as a tumour rejection antigen (TRA) and in combination with adjuvants, can produce vaccines useful for treating a variety of figures.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gp100 Pmel117; human; Tumour Rejection Antigen; TRA; tumour; cancer; HLA; Human Leucocyte Antigen; MHC; Major Histocompatibility Complex; CTL; cytolytic Tlymphocyte; immune response stimulator; prophylaxis; therapy; diagnosis; TNF; tumour necrosis factor; vaccine; cytostatic.
                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                         The patent discloses MAGE-A10 and MAGE-A8 polypeptide, nonapeptide and
                                                                                                                                                                                                                                                                                                                                                                                                Novel polypeptides expressed in tumor cells useful for treating cancers have an ability to complex with a major histocompatibility complex molecule and comprises a specific unbroken amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-412317/35
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                                                                 DB 21;
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Schultz I
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(UYVR-)
                                                                                                                                                                                                                                                                                New MAGE-A3 class II binding peptides, useful to diagnose and treat tumours, are fragments of MAGE-A3 which bind to and are presented to lymphocytes by human leukocyte antigen class II molecules -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         {\tt MAGE-A3}; {\tt HLA} class {\tt II}; human leukocyte antigen; antibody; {\tt vaccine}; {\tt cancer}; {\tt human}; {\tt tumour}; {\tt tumour} associated gene product.
       AAY90803
                                                                                                               Sequence
                                                                                                                                                                                                                                                 The present invention relates to MAGE-A3 (tumour associated gene
                                                                                                                                                                                                                                                                Disclosure; Page 33; 119pp; English.
                                                                                                                                                                                                                                                                                                                 WPI; 2000-317713/27.
                                                                                                                                                                                                                                                                                                                                                                                          05-OCT-1998;
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                                                               KTWGQYWAV 9
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      peptide; 9
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                                                                                       91.4%;
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J, Lethe B, Thielemans K, Corthals
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Pred. No. 9.3e+05;
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25-AUG-2000 AAY90803;

(first entry)

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Human leukocyte antigen

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes isolated peptides which bind to human leukocyte antigen (HLA)-B35 molecules leading to recognition and lysis of the resulting complexes by cytolytic T cells. The isolated peptides are sometimes derived from tyrosinase. Compositions comprising the peptides of the invention can be used to generate immune responses,
                                                     Homo sapiens
                                                                                            gp100-Pmell17; antigen; epitope; cytotoxic T lymphocyte; CTL; complex;
                                                                                                                        gp100-Pmel117 antigenic peptide epitope (residues 154-162).
                                                                                                                                                                                AAY92299
                                                                                                                                                                                                         AAY92299 standard;
                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                          WO200020445-A2
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13-APR-2000

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                                                                                                                        A novel method of isolation of cytotoxic T-lymphocytes (CTL) clones comprises successive steps of stimulation and testing of lymphocytes with antigen presenting cells (APCs) which present antigens derived from different expression systems. The CTL clones isolated recognize specific antigenic peptides of proteins, preferably of the MAGE family. The APC is autologous and each expression systems is different from at least one of the other expression systems, therefore isolating a cytotoxic T cell clone specific for the protein. The method can also be used to identify an antigenic peptide epitope. Isolated CTL clones specific for a peptide/human leukocyte antigen (HLA) complex are claimed. The complexes on the cell surface are useful for treating pathological conditions characterized by abnormal expression of the complexes.
                                                                                                                                                                                                                                                                                                                                                                                                                Stroobant V, Cornelis GR, Schultz E, Warnier G.
                                                                                                                                                                                                                                                                                                                                           Isolation of cytotoxic T-lymphocytes clones by successive steps stimulation and testing of lymphocytes with antigen presenting contact which present antigens derived from different expression systems
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Boon-Falleur T,
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1 KTWGQYWAV 9
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Maximum Match 100%
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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               US-08-787-547-61
US-08-902-516-29
US-08-902-516-29
US-09-036-582-26
US-09-16-448-71
US-09-16-848-71
US-09-16-848-71
US-09-16-848-71
US-09-16-848-71
US-09-16-847-185-29
US-09-18-72
US-09-847-185-29
US-09-847-185-29
US-09-847-185-22
US-09-847-185-22
US-09-847-185-22
US-09-847-185-22
US-09-847-185-22
US-09-18-8528-27
US-09-18-18-8528-27
US-08-388-8528-12
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121, 6
e 121, 6
7, Appli
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26, Appl
26, Appl
30, Appl
46, Appl
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79, Appl
71, ```

| 45               | 44                | 43               | 42               | 41               | 40               | 39               | 38               | 37               | 36               | 3<br>5           | 34               | 33               | 32               | 31               | 30               | 29                | 28               |
|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|
| 48               | 48                | 48               | 48               | 48               | 48               | 48               | 48               | 48               | 48               | 48               | 48               | 48               | 50               | 50               | 50               | 50                | 50               |
| 82.8             | 82.8              | 82.8             | 82.8             | 82.8             | 82.8             | 82.8             | 82.8             | 82.8             | 82.8             |                  | 82.8             | 82.8             | 86.2             | 86.2             | 86.2             |                   | 86.2             |
| φ                | 9                 | 9                | 9                | 9                | ,<br>9           | 9                | 9                | 9                | 9                | 9                | 9                | 8                | 661              | 661              | 661              | 661               | 661              |
| 4                | 4                 | ω                | ω                | W                | ω                | w                | Ŋ                | Ŋ                | N                | N                | N                | 4.               | 4                | ω                | N                | N                 | N                |
| US-09-073-138-71 | US-08-388-852B-23 | US-09-267-439-75 | US-09-267-439-74 | US-09-267-439-73 | US-09-267-439-72 | US-09-267-439-71 | US-08-417-174-75 | US-08-417-174-74 | US-08-417-174-73 | US-08-417-174-72 | US-08-417-174-71 | US-08-388-852B-8 | US-09-073-138-27 | US-09-267-439-27 | US-09-007-961-27 | US-08-231-565A-27 | US-08-41/-1/4-2/ |
| Sequence 7       | Sequence 2:       | Sequence 7:      | Sequence 7       | Sequence 73      | Sequence 72      | Sequence 71      | Sequence 7       | Sequence 74      | Sequence 7:      | Sequence 7       | Sequence 7       | Sequence 8,      | Sequence 27      | Sequence 2       | Sequence 27      | Sequence 2        | sequence 27      |
| ,                | Ü                 | 75,              | •                | •                | •                | •                | •                | •                | •                |                  |                  |                  |                  | 7                | •                | 7                 | -                |
| Ąpp              | App               | App.             | App              | App.             | App.             | App              | App              | App              | App              | App              | App              | Įgg              | App              | App              | Ąpp              | App               | App              |

## ALIGNMENTS

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Query Match
Best Local Similarity
Thes 8; Conserve
 ; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-787-547-61
 RESULT 1
US-08-787-547-61
 Sequence 61, Application US/08787547 Patent No. 5783567
 ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows 95
SOFTWARE: FastSEQ for Windows Version 2.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/787,547
FILING DATE: 22-JAN-1997
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER:
IFILING DATE:
FILING DATE:
ATTORNEY/AGERT INFORMATION:
NAMB: Fraser, Janis K.
REGISTRATION NUMBER: 34,819
REFERENCE/DOCKET NUMBER: 08191/003001
TELEPHONE: 617-542-8906
 TELEFAX: 617-542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 9 amino acids
 GENERAL INFORMATION:
 APPLICANT: Hedley, Mary Lynne
APPLICANT: Curley, Joanne M.
APPLICANT: Langer, Robert S.
TITLE OF INVENTION: MICROPARTICLES FOR DELIVERY
TITLE OF INVENTION: OF NUCLEIC ACID
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES:
 CITY: Boston
STATE: MA
 ADDRESSEE: Fisn & No. Company of the Street STREET: 225 Franklin Street
 COUNTRY:
 91.4%;
ilarity 88.9%;
Conservative
 SD
 Fish & Richardson, P.C.
 107
 61 :
 0
 Score 53; I
Pred. No. 2
 Mismatches
 DB 1; I
2.5e+05;
 2.0
 Length
 Indels
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9

0,

Gaps

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KTWGQYWAV 9

RESULT 2 US-08-417-174-46

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RESULT 3
US-08-902-516-29
 В
 S
 Query Match
Best Local Similarity
Whiches 8; Conserve
 US-08-417-174-46
 Sequence 29, Application US/08902516 Patent No. 5891432
 COUNTY: 10154
ZIP: 10154
COMPUTER READABLE FORM:
COMPUTER: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
COMPUTER: PC-DOS/MS-DOS
 Sequence 46,
 GENERAL INFORMATION:
 CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
 GENERAL INFORMATION:
 TELEX: 421792
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
 APPLICANT: SOO HOO, WILLIAM TITLE OF INVENTION: MEMBRANI TITLE OF INVENTION: COMPRISTITLE OF INVENTION: RESPONSE
 MOLECULE TYPE:
 APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
 CURRENT APPLICATION DATA:
 TITLE OF INVENTION: TITLE OF INVENTION:
 NUMBER OF SEQUENCES:
 CORRESPONDENCE ADDRESS:
 APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
 NUMBER OF SEQUENCES:
 TELEPHONE: (212) 751-6849
 STRANDEDNESS:
 CITY: NEW YORK
 ADDRESSEE:
 TOPOLOGY:
 APPLICATION NUMBER: US/0
FILING DATE: 22-APR-1994
 ADDRESSEE:
 amino acid
 KTWGQYWAV 9
 KTWGQYWQV 9
 NEW YORK
 Application US/08417174
 345 PARK AVENUE
 Conservative
 Unknown
 KAWAKAMI, YUTAKA; ROSENBERG,
 MORGAN & FINNEGAN, L.L.P.
CAMPBELL & FLORES, LLP
 Peptide
 Unknown
 91.4%;
88.9%;
 THEIR USE
 MEMBRANE-BOUND CYTOKINE COMPOSITIONS OF MODULATING AN IMMUNE
 RESPONSE USING SAME
 MELANOMA ANTIGENS AND
 126
 46:
 2026-4124US1
 Score 53;
Pred. No.
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 Gaps
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US-09-183-706-30
, Sequence 30, Application US/09183706
; Patent No. 6245525
; GENERAL INFORMATION:

APPLICANT: Martelange, Valrie

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RESULT 5
 밁
 á

// ORGANISM: Human gp100Pmell17 peptide
US-09-036-582-26

 RESULT 4
US-09-036-582-26
 片
 ş
 Query Match
Best Local S
Matches 8
 SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 26
LENGTH: 9
 Query Match
Best Local Similarity
Matches 8; Conserv
 Patent No. 596538;
GENERAL INFORMATION
 COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Ver

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/902,516
 APPLICANT: van der Bruggen, Pierre
APPLICANT: Cornelis, Guy R.
TITLE OF INVENTION: DELIVERY OF PROTEINS INTO EUKARYOTIC CELLS
TITLE OF INVENTION: WITH RECOMBINANT YERSINIA
FILE REFERENCE: 11154
 CURRENT APPLICATION NUMBER: US/09/036,582A CURRENT FILING DATE: 1998-03-06 NUMBER OF SEQ ID NOS: 39
 TELEPHONE: (619)535-90
TELEPAX: (619)535-8949
INFORMATION FOR SEQ ID NO:
 APPLICATION NUMBER: US/08/902
FILING DATE: 29-7UL-1997
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-IM
TELECOMMUNICATION INFORMATION:
 TYPE: PRT
 MOLECULE TYPE: peptide
 SEQUENCE CHARACTERISTICS
 TOPOLOGY:
 COUNTRY:
 LENGTH:
 26, Application US/09036582A
 Similarity
8; Conserv
 92123
 San Diego
 amino acid
 KTWGQYWAV 9
 KTWGQYWAV
 California
 4370 La Jolla Village Drive, Suite 700
 9 amino acids
 United States
 Conservative
 Conservative
 linear
 (619)535-9001
 91.4%;
88.9%;
 91.4%;
 29:
 P-IM
 Score 53; DB 2;
Pred. No. 2.5e+05;
0; Mismatches 1
 Score 53; DB 2;
Pred. No. 2.5e+05;
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 2442
 Version #1.25
 Length 9;
 Length 9;
 Indels
 0,
 0
 Gaps
 Gaps
 0
 0
```

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US-09-267-439-46
 뮍
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 ; TYPE: PRT; ORGANISM: Homo sapiens
US-09-183-706-30
 PRIOR APPLICATION.

APPLICATION NUMBER: US/08/41/,...

FILING DATE: 05-APR-1995

APPLICATION NUMBER: US/08/231,565

FILING DATE: 22-APR-1994

ATTORNEY/AGENT INFORMATION:

NAME: CAROL M. GRUPPI

REGISTRATION NUMBER: 37,341

REFERENCE/DOCKET NUMBER: 2026-4124

TELECOMMUNICATION INDRAMATION:

TELECOMMUNICATION 178-4800
 Sequence 46, Patent No. 6
 Query Match 91.4%;
Best Local Similarity 88.9%;
Matches 8; Conservative
 SEQ ID NO 30
 APPLICANT: 1
 CURRENT APPLICATION NUMBER: US/09/183,706
CURRENT FILING DATE: 1998-10-30
EARLIER APPLICATION NUMBER: 09/122,989
EARLIER FILING DATE: 1999-07-27
 TELEX: 421792
INFORMATION FOR SEQ ID NO:
 NUMBER OF SEQ ID NOS: 43
 APPLICANT: De Smet, Charles
APPLICANT: Boon-Falleur, Thierry
TITLE OF INVENTION: TUMOR ASSOCIATED NUCLEIC ACIDS AND USES THEREFOR
FILE REFERENCE: L0461/7054
 STRANDEDNESS:
TOPOLOGY: Unk
MOLECULE TYPE:
 LENGTH: 9
 SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
 SEQUENCE CHARACTERISTICS:
 COMPUTER READABLE FORM:
 TITLE OF INVENTION:
TITLE OF INVENTION:
 APPLICANT:
 CORRESPONDENCE ADDRESS:
 STREET: 345 PARK
CITY: NEW YORK
STATE: NEW YORK
 MEDIUM TYPE:
 TYPE: amino acid
 FILING DATE:
 COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
 COUNTRY: U
 ADDRESSEE:
 ENGTH:
 INFORMATION:
 5, Application US/09267439
6270778
 KTWGQYWAV 9
 KTWGQYWQV 9
 345 PARK AVENUE
 USA
 STEVEN A.
 KAWAKAMI, YUTAKA; ROSENBERG,
 Unknown
 MORGAN & FINNEGAN, L.L.P
 FLOPPY DISK
 Unknown
 METHODS
 MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
 91.4%;
 US/09/267,439
 46:
 Score 53;
 2026-4124US1
 0; Mismatches
 Score 53; I
Pred. No. 2
 멂
 DB 3;
2.5e+05;
 1; Indels
Length 9;
 Length 9;
 0
 Gaps
 0
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We Smet, Charles

FILE OF INVENTION: TUMOR ASSOCIATED NUCLEIC ACIDS AND USES THEREFOR FILE REFERENCE: L0461/7054

CURRENT FILING DATE: 2000-05-10
PRIOR APPLICATION NUMBER: 09/183,706
PRIOR APPLICATION NUMBER: 09/183,706
PRIOR FILING DATE: 1998-10-30
NUMBER OF SEQ ID NOS: 43
SEQ ID NO 30
LENGTH-
밁
 밁
 ; ORGANISM: Homo sapiens
US-09-567-995-30
 US-09-567-995-30
 US-09-166-448-71
 US-09-166-448-71
 CURRENT APPLICATION NUMBER: US/09/166,448
CURRENT FILING DATE: 1998-10-05
NUMBER OF SEQ ID NOS: 81
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 71
 Matches
 Query Match
Best Local (
 Query Match
 Best Local Similarity 88.9%;
Matches 8; Conservative
 Matches
 Best Local Similarity
 GENERAL INFORMATION:
 Patent No.
 LENGTH: 9
TYPE: PRT
 APPLICANT: van der Bruggen, Pierre
APPLICANT: Thielemans, Kris
APPLICANT: Corthals, Jurgen
TITLE OF INVENTION: MAGE-3 PEPTIDES PRESENTED
 APPLICANT: Chaux, Pascal
APPLICANT: Vantomme, Valrie
APPLICANT: Stroobant, Vincent
APPLICANT: Boon-Falleur, Thierry
 FILE REFERENCE: L0461/7052
 TYPE: PRT
 ORGANISM: Homo sapiens
 Local Similarity
es 8; Conserv
 71, Application US/09166448
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 1 KTWGQYWAV 9
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 Conservative
 Conservative
 91.4%;
88.9%;
 88.98;
 0; Mismatches
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0; Mismatches 1
 Score 53; DB 4; Pred. No. 2.5e+05;
 Score 53; I
Pred. No. 2.
 Mismatches
 DB 3;
 5e+05
 BY HLA CLASS II MOLECULES
 ۲,
 Length 9;
 Length 9;
 Indels
 Indels
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 0,
 0,
 Gaps
 Gaps
 0
 0
 0
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RESULT 9 US-09-165-863-26

GENERAL INFORMATION:

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RESULT 11
US-09-847-185-29
; Sequence 29, Application US/09847185
; Patent No. 6482407
 밁
 밁
 Ś
 ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-697-884-71
 RESULT 10
US-09-697-884-71
 US-09-165-863-26
 NUMBER OF SEQ ID NOS: 81
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 71
 Best Local Similarity
Matches 8; Conserv
 Query Match
 GENERAL INFORMATION:
 Matches
 Query Match
 SEQ ID NO 26
 Sequence 26, Application US/09165863
 Patent No.
 GENERAL INFORMATION:
 APPLICANT: van der Bruggen, Pierre
APPLICANT: Thielemans, Kris
APPLICANT: Corthals, Jurgen
TITLE OF INVENTION: MAGE-3 PEPTIDES PRESENTED BY HLA CLASS II MOLECULES
FILE REFERENCE: L0461/7052
 CURRENT APPLICATION NUMBER: US/09/165,863
CURRENT FILING DATE: 1999-10-02
NUMBER OF SEQ ID NOS: 45
 APPLICANT: Luiten, Nover---
APPLICANT: Duffour, Marie-Therese
 APPLICANT: Chaux, Pascal
APPLICANT: Vantomme, Va
APPLICANT: Stroobant, V
 TITLE OF INVENTION: TUMOR ANTIGENS AND CTL CLONES ISOLATED BY A NOVEL TITLE OF INVENTION: PROCEDURE FILE REFERENCE: 11727
 PRIOR APPLICATION NUMBER: 09/166,448 PRIOR FILING DATE: 1998-10-05
 CURRENT APPLICATION NUMBER: US/09/697,884
CURRENT FILING DATE: 2000-10-27
 APPLICANT:
 APPLICANT: Stroobant, Vincent
APPLICANT: Lurquin, Christophe
APPLICANT: Boon-Falleur, Thierry
APPLICANT: Chaux, Pascal
 APPLICANT: Demotte, Nathalie
APPLICANT: van der Bruggen, Pierre
 SOFTWARE: PatentIn Ver. 2.1
 TYPE: PRT
ORGANISM: Human gp100Pmel117 peptide
 ENGTH:
 LENGTH:
 Local Similarity les 8; Conserv
 KTWGQYWAV 9
 KTWGQYWAV 9
 Stroobant, Vincent
 Application US/09697884
 Boon-Falleur, Thierry
 Vantomme, Val, rie
 Conservative
 Conservative
 91.4%;
88.9%;
 91.4%;
88.9%;
 0
 Score 53; DB 4;
Pred. No. 2.5e+05;
 Score 53; DB 4;
Pred. No. 2.5e+05;
 Mismatches
 Mismatches
 1; Indels
 Length 9;
 Length 9;
 Indels
 0
 0,
 Gaps
 Gaps
 0
 0
```

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TOPOLOGY: I TOTAL

TOPOLOGY: I TYPE: Peptide

SEQUENCE DESCRIPTION: SEQ ID NO: 29:
US-09-847-185-29
 밁
 RESULT 12
US-08-388-852B-22
 Ś
 Matches
 Query Match
Best Local Similarity
 sequence 22, Application US/08388852B
Patent No. 6500919
 ARCHL NO. CALCELL NO. GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Adema, Gosse Jan; Figdor, Carl Gustav.
TITLE OF INVENTION: Melanoma associated antigenic polypeptide,
TITLE OF INVENTION: epitopes thereof and vaccine against melanoma.
 INFORMATION FOR SEQ ID NO: 29: SEQUENCE CHARACTERISTICS:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/201,931
APPLICATION NUMBER: 09/201,931
FILING DATE: «CUARNOWN>
ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-IM 2442
TELECOMMUNICATION INFORMATION:
TELECHONE (619)435.0001
 CUUNIKY: the Netherlands
ZIP: 6525 EX
 CITY: Nijmegen
STATE: Brabant
 STREET:
 ADDRESSEE:
APPLICATION NUMBER:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/847,185
FILING DATE: 01-May-2001
CLASSIFICATION: CUNKNOWN>
 APPLICANT: SOO HOO, WILLIAM
TITLE OF INVENTION: MEMBRANE-BOUND CYTOKINE COMPOSITIONS
COMPRISING GM-CSF AND METHODS OF MODULATING AN IMMUNE
 CORRESPONDENCE ADDRESS:
ADDRESSEE: CAMPBELL & FLORES, LLP
STREET: 4370 La Jolla Village Drive, Suite 700
 NUMBER OF SEQUENCES:
 1 KTWGQYWQV 9
 1 KTWGQYWAV 9
 8
 CITY: San Diego
STATE: California
 TYPE: amino acids
 TELEPHONE: (619)535-9001
TELEFAX: (619)535-8949
 E: Adema, Gosse Jan; Figdor, Carl Gustav
Philips van Leydenlaan 25
 Conservative
 United States
 91.4%;
US/08/388,852B
 RESPONSE USING SAME
 Score 53; DB 4;
Pred. No. 2.5e+0
 Mismatches
 Version #1.30 (EPO)
 5e+05
 Length 9;
 0
 Gaps
 0
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US-09-073-138-46
 밁
 밁
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 RESULT 14
 ; TYPE: PRT
; ORGANISM: Human gp100Pmel117 peptide
US-09-289-350-26
 US-08-388-852B-22
 Sequence 46,
 Matches
 Query Match
Best Local
 SEQ ID NO 26
 Best Local Similarity
Matches 8; Conserv
 Query Match
 CURRENT APPLICATION NUMBER: US/09/289,350
CURRENT FILING DATE: 1999-04-09
PRIOR APPLICATION NUMBER: 09/165,863
PRIOR FILING DATE: 1998-10-02
NUMBER OF SEQ ID NOS: 49
 APPLICANT:
APPLICANT:
APPLICANT:
 ENERAL INFORMATION:
 atent No.
 GENERAL INFORMATION:
 APPLICANT:
 SOFTWARE:
 TITLE OF INVENTION: TUMOR ANTI
 APPLICANT:
 APPLICANT:
 FILING DATE: February INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
 APPLICANT
 LENGTH:
 TITLE OF INVENTION:
TITLE OF INVENTION:
 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, APPLICANT: STEVEN A.
 MOLECULE TYPE: P
HYPOTHETICAL: NO
ANTI-SENSE: NO
 CORRESPONDENCE
 NUMBER OF SEQUENCES:
 TYPE: amino acid
STRANDEDNESS: single
 ADDRESSEE:
 TOPOLOGY:
 ENGTH:
 No.
 , 26,
No. 6531451
 1 KTWGQYWAV 9
 6, Application US/09073138
6537560
 Similarity
8; Conserv
 Stroobant, Vince...
Stroobant, Vince...
Stroobant, Vince...
Cornelis, Guy R.
Cornelis, Guy R.
Beon-Falleur, Thierry
Boon-Falleur, Thierry
Van Der Bruggen, Pierre
Van Der Bruggen, Pierre
Van Der TUMOR ANTIGENS AND CTL CLONES ISOLATED BY A NOVEL
 KTWGQYWQV 9
 KTWGQYWAV 9
 PatentIn Ver. 2.1
 Application US/09289350
 Deffour, Marie-Therese
 Demotte, Nathalie
 Luiten, Rosalie
 Chaux, Pascal
 9 amino acids
 Fraversari,
 91.4%;
llarity 88.9%;
Conservative
 Conservative
 linear
MORGAN & FINNEGAN, L.L.P
 ADDRESS:
 peptide
 Christophe
 MELANOMA ANTIGENS AND THERAPEUTIC THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS
 91.4%;
 Catia
 ; Score 53; DB
; Pred. No. 2.5e
0; Mismatches
 Score 53; DB Pred. No. 2.5e
 0
 DB 4;
 DB 4; Length 9;
2.5e+05;
 1; Indels
 Length 9;
 Indels
 ..
 <u>,</u>
 Gaps
 Gaps
 0
 0
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; OTHER INFORMATION: Homo Sapiens source US-09-574-749B-27
 FILE REFERENCE: C1005/7012/KA/ERG
CURRENT APPLICATION NUMBER: US/09/574,749B
CURRENT FILING DATE: 2002-05-31
PRIOR APPLICATION NUMBER: US 60/107,972
PRIOR FILING DATE: 1998-11-12
PRIOR APPLICATION NUMBER: PCT/US99/26795
PRIOR APPLICATION NUMBER: US 09/524,749
PRIOR APPLICATION NUMBER: US 09/524,749
PRIOR FILING DATE: 2000-05-18
 RESULT 15
US-09-574-749B-27
 US-09-073-138-46
 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 27
 GENERAL INFORMATION:
 Sequence 27, Appli
Patent No. 6548299
 Matches
 Query Match
Best Local Similarity
 NUMBER OF SEQ ID NOS: 58
 TITLE OF INVENTION: LYMPHOID TISSUE-SPECIFIC CELL PRODUCTION TITLE OF INVENTION: FROM HEMATOPOIETIC PROGENITOR CELLS IN TITLE OF INVENTION: DEVICES
 APPLICATION NUMBER: US/08/417
FILING DATE: 05-APR-1995
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
 APPLICANT: ROSENZWEIG, Michael APPLICANT: PYKETT, Mark J.
 INFORMATION FOR SEQ ID NO:
 APPLICANT:
 APPLICANT:
 ORGANISM: Artificial Sequence FEATURE:
 TYPE: amino acid
STRANDEDNESS: Unkr
TOPOLOGY: Unknown
MOLECULE TYPE: Pepti
 TYPE: PRT
 ENGTH:
 FILING DATE:
FILING DATE:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US/08/417,174
 COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/073,138
 SEQUENCE CHARACTERISTICS:
 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
 TELEFAX: 121792
 TELEPHONE: (212) 751-6849
 STREET:
 1 KTWGQYWQV 9
 8;
 T: 345 PARK AVENUE
NEW YORK
: NEW YORK
 KTWGQYWAV 9
 POZNANSKY, Mark C.
 PYKETT, Mark J.
SCADDEN, David T.
 Application US/09574749B
 Conservative
 USA
 Unknown
 Peptide
 Unknown
 91.4%;
 46:
 <u>.</u>
 2026-4124US1
 Score 53; I
Pred. No. 2.
 Mismatches
 DB 4;
 .5e+05
 Length 9;
 IN THREE-DIMENSIONAL
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 Gaps
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RESULT 17
US-08-417-174-47
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 US-09-341-982-82
 US-09-341-982-82
 RESULT 16
 Query Match
Best Local S
Matches 8
 Sequence 47, Application US/08417174 Patent No. 5844075
 Matches
 Query Match
 SEQ ID NO 82
 GENERAL INFORMATION:
 TITLE OF INVENTION: CYSTEINE-DEPLETED PEPTIDES RECOGNIZED BY A3-RESTRICTED TITLE OF INVENTION: CYTOTOXIC LYMPHOCYTES, AND USES THEREFOR FILE REFERENCE: SLINGLUFF-3B CURRENT APPLICATION NUMBER: US/09/341,982 CURRENT FILING DATE: 1999-09-20 EARLIER APPLICATION NUMBER: PCT/US98/01592 EARLIER APPLICATION NUMBER: PCT/US98/01592 EARLIER FILING DATE: 1998-01-29
 EARLIER APPLICATION NUMBER: 60/037,781
EARLIER FILING DATE: 1997-01-31
NUMBER OF SEQ ID NOS: 104
 GENERAL INFORMATION:
 APPLICANT: SLINGLUFF, Craig L. APPLICANT: HUNT, Donald F. APPLICANT: ENGELHARD, Victor H. APPLICANT: KITTLESEN, David
 SOFTWARE: PatentIn Ver. 2.0
 OTHER INFORMATION: Description of Artificial Sequence: Fragment OTHER INFORMATION: human protein
 TYPE: PRT
 FEATURE:
 ORGANISM: Artificial Sequence
 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
 SOFTWARE: ASCII
CURRENT APPLICATION DATA:
 TITLE OF INVENTION: TITLE OF INVENTION:
 APPLICANT: KAWAKAMI, APPLICANT: STEVEN A.
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES:
 STREET: 345 PARK AVENUE CITY: NEW YORK STATE: NEW YORK
 91.4%;
Local Similarity 88.9%;
les 8; Conservaring
 APPLICATION NUMBER:
 OPERATING SYSTEM:
 COUNTRY:
 ADDRESSEE:
 , 82, App
No. 6558671
 10154
 1 KTWGQYWAV 9
 Similarity
8; Conserv
 KTWGQYWAV 9
 Application US/09341982
 USA
 KAWAKAMI, YUTAKA; ROSENBERG,
 Conservative
 MORGAN & FINNEGAN, L.L.P.
 MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
METHODS
 91.4%;
 PC-DOS/MS-DOS
 126
US/08/417,174
 0; Mismatches
 Score 53;
Pred. No.
 Score 53;
Pred. No.
 2.5e+05;
 DB 4;
2.5e+05;
 DB 4;
 1; Indels
 Length 9;
 Length 9;
 0,
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 Gaps
 Gaps
 0;
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 RESULT 18
US-09-267-439-47
 US-08-417-174-47
 Patent No.
 Matches
 Best Local Similarity
 Query Match
 APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION UNMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124U
 COMPUTER READABLE FORM:
MEDIUM TYPE: PLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
 TELEX: 421792
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
 ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 751-6849
 GENERAL INFORMATION:
 FILING DATE:
PRIOR APPLICATION DATA:
 MOLECULE TYPE:
 TITLE OF INVENTION: TITLE OF INVENTION:
 TYPE: Unknown
TOPOLOGY: Unknown
TOPOLOGY: Peptide
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
FILING DATE: 22-APR-
CLASSIFICATION: 435
 TELECOMMUNICATION INFORMATION:
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES:
 COUNTRY: US
ZIP: 10154
 CITY: NEW YORK STATE: NEW YORK
 TELEFAX:
 TELEPHONE: (212) 758-48
TELEFAX: (212) 751-6849
 STREET:
 FILING DATE:
 ADDRESSEE:
 ENGTH:
 KTWGQYWAV 9
 Application US/09267439
 345 PARK AVENUE
 10
 Conservative
 STEVEN A.
 USA
 KAWAKAMI, YUTAKA; ROSENBERG,
 MORGAN & FINNEGAN, L.L.P.
 22-APR-1994
 05-APR-1995
 91.4%;
88.9%;
 METHODS
 MELANOMA ANTIGENS AND THERAPEUTIC THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
 US/08/231,565
 47:
 47:
 0; Mismatches
 2026-4124US1
 Score 53; DB 2;
Pred. No. 0.021;
 2026-4124US1
 Length 10;
 0,
 Gaps
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 S
 US-09-073-138-47
 RESULT 20
 US-08-388-852B-21
 US-08-388-852B-21
 US-09-267-439-47
 Query Match
Best Local Similarity bs...
Thes 8; Conservative
 sequence 47, Application US/09073138
Patent No. 6537560
GENERAL INFORMATION:
 Patent No.
 Sequence
 Matches
 Query Match
Best Local Similarity
 GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Adema, Gosse Jan; Figdor, Carl Gustav.
TITLE OF INVENTION: Melanoma associated antigenic polypeptide,
TITLE OF INVENTION: epitopes thereof and vaccine against melanoma.
"""""""""" OF SEQUENCES: 38
 APPLICATION NUMBER: US/08/388,852B FILING DATE: February 15, 1995 INFORMATION FOR SEQ ID NO: 21:
 APPLICANT: KAWAKAMI,
APPLICANT: STEVEN A.
TITLE OF INVENTION: M
TITLE OF INVENTION: T
 TYPE: amino acid
STRANDEDNESS: Unkr
TOPOLOGY: Unknown
MOLECULE TYPE: Pept:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
 NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN &
 SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO) CURRENT APPLICATION DATA:
 MOLECULE TYPE: PHYPOTHETICAL: NO ANTI-SENSE: NO
 SEQUENCE CHARACTERISTICS:
 STRANDEDNESS: single TOPOLOGY: linear
 STREET: Philips
CITY: Nijmegen
 TYPE: amino acid
 COUNTRY:
 ADDRESSEE:
 ENGTH:
 6525 EX
 65009
 KTWGQYWAV 9
 Brabant
 KTWGQYWAV 9
 Application US/08388852B
 E: Adema, Gosse Jan; Figdor, Carl Gustav
Philips van Leydenlaan 25
5: MORGAN & FINNEGAN, L.L.P.
345 PARK AVENUE
 10 amino acids
 the Netherlands
 KAWAKAMI, YUTAKA; ROSENBERG,
 Conservative
 Unknown
 linear
 Peptide
 peptide
 Unknown
 91.4%;
88.9%;
 91.4%;
88.9%;
 THEIR USE
 MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
 126
 0; Mismatches
 Score 53; DB 4; Length 10; Pred. No. 0.021;
 0; Mismatches
 Score 53; DB 3; Length 10; Pred. No. 0.021;
 1; Indels
 0
 0
 Gaps
 Gaps
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 US-08-388-852B-20
 RESULT 21
 ; MOLECULE TYPE: Peptide US-09-073-138-47
 Sequence 20, Application US/08388852B
Patent No. 6500919
 Matches .
 Query Match
 FILING DATE: February 15, 1995 INFORMATION FOR SEQ ID NO: 20: SEQUENCE CHARACTERISTICS:
 GENERAL INFORMATION: APPLICANT: Adema,
 TELEX: 421792
INFORMATION FOR SEQ ID NO:
 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/08/388,852B
APPLICATION NUMBER: US/08/388,852B
 APPLICANT: AND Melanoma absorbing of INVENTION: Melanoma absorbing thereof TITLE OF INVENTION: epitopes thereof
 REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
 SEQUENCE CHARACTERISTICS:
 FILING DATE:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US/0
FILING DATE: 05-APR-1995
CLASSIFICATION:
 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/073,138
 CORRESPONDENCE ADDRESS:
 ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
 STREET: Philips
CITY: Nijmegen
STATE: Brabant
 y maccin 91.4%;
Local Similarity 88.9%;
les 8; Conservative
 STRANDEDNESS:
TOPOLOGY: Un
 TELEPHONE: (212) 751-6849
 TYPE: amino acids
 COUNTRY: U
 STRANDEDNESS:
 ADDRESSEE:
 TYPE: amino acid
 SOFTWARE: ASCII
 ENGTH:
 6525 EX
 1 KTWGQYWAV 9
 E: Adema, Gosse Jan; Fi
Philips van Leydenlaan
 Adema, Gosse Jan; Figdor, Carl Gustav.
VENTION: Melanoma associated antigenic polypeptide,
VENTION: epitopes thereof and vaccine against melanoma.
 USA
 the Netherlands
 Unknown
linear
 (212) 758-4800
 Unknown
 single
 Gosse Jan; Figdor,
an Leydenlaan 25
 US/08/417,174
 47:
 0;
 2026-4124US1
 Score 53; DB 4; Length 10; Pred. No. 0.021;
 Mismatches
 Carl Gustav
 (EPO)
 0;
 Gaps
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MOLECULE TYPE:

peptide

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밁
 RESULT 22
US-08-388-852B-10
 묽
 ; HYPOTHETICAL:
; ANTI-SENSE: 1
US-08-388-8528-20
 US-08-417-174-121
 บร-08-388-852B-10
 Sequence 121, Application US/08417174
Patent No. 5844075
 Sequence 10, Application US/08388852B
Patent No. 6500919
GENERAL INFORMATION:
 Query Match 91.4%;
Best Local Similarity 88.9%;
Matches 8; Conservative
 Matches
 Query Match
Best Local (
 APPLICATION NUMBER: US/08/388,852B
FILING DATE: February 15, 1995
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
 GENERAL INFORMATION:
 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, APPLICANT: STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS A TITLE OF INVENTION: THEIR USE IN DIAGNOTITLE OF INVENTION: METHODS
 CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
 MOLECULE TYPE: peptide HYPOTHETICAL: NO
 SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO) CURRENT APPLICATION DATA:
 COMPUTER READABLE FORM:
 TITLE OF INVENTION:
 NUMBER OF SEQUENCES:
 CORRESPONDENCE ADDRESS:
 APPLICANT:
 NUMBER OF SEQUENCES:
 TYPE: amino acid
TOPOLOGY: linear
 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
 STREET:
 LENGTH:
 MEDIUM TYPE:
 COUNTRY:
 CITY: Nijmegen
 ADDRESSEE:
 3: Brabant
TRY: the Netherlands
6525 EX
 Similarity
8; Conserv
 NEW YORK
 KTWGQYWQV 11
 KTWGQYWAV 9
 KTWGQYWQV 11
 KTWGQYWAV 9
 NEW YORK
 12 amino acids
 E: Adema, Gosse Jan, Figdor, Carl Gustav
Philips van Leydenlaan 25
USA
 345 PARK AVENUE
 Adema, Gosse Jan; Figdor, Carl Gustav.
 Conservative
 NO
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 ğ
 Melanoma associated antigenic polypeptide, epitopes thereof and vaccine against melanoma. 38
 THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS
126
 91.4%;
 MELANOMA ANTIGENS AND
 Score 53; I
Pred. No. 0.
 Score 53; I
Pred. No. 0.
 Mismatches
 DB 4;
0.025;
 DB 4;
 Length 12;
 Length 11;
 Indels
 0
 0
 Gaps
 Gaps
 0
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밁
 US-09-267-439-121
 RESULT 24
 ; MOLECULE TYPE: Protein US-08-417-174-121
 Matches
 Patent No.
 Sequence 121, Application US/09267439 Patent No. 6270778
 Query Match
Best Local Similarity
 GENERAL INFORMATION
 TELEX: 421792
INFORMATION FOR SEQ ID NO:
 APPLICANT: STEVEN A.
TITLE OF INVENTION: MI
TITLE OF INVENTION: MI
TITLE OF INVENTION: MI
NUMBER OF SEQUENCES: 1
 COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY |
 CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
STREET: 345 PARK AVENUE
 SEQUENCE CHARACTERISTICS:
LENGTH: 661
 ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
 FILING DATE:
PRIOR APPLICATION DATA:
 APPLICANT:
 APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-ARR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
CLASSIFICATION: 435
CLASSIFICATION: 435
 CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
174
 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPEY DISK
COMPUTER: IBM FC COMPATIBLE
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
 REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
 ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
 APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
 TELEPHONE: (212) 751-6849
 REGISTRATION NUMBER:
 ZIP: 10154
 CITY: NEW YORK
 TOPOLOGY:
 COUNTRY:
 STRANDEDNESS:
 REGISTRATION NUMBER: 37,341
 154 KTWGQYWQV 162
 1 KTWGOYWAV 9
 8;
 amino acid
 NEW YORK
 USA
 KAWAKAMI, YUTAKA; ROSENBERG,
 Conservative
 Unknown
 (212) 758-4800
 FLOPPY DISK
 Unknown
 METHODS
126
 91.4%;
 MELANOMA ANTIGENS AND THERAPEUTIC THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
37,341
 0
 2026-4124US1
 Score 53;
Pred. No. 1
 Mismatches
 DB 2;
 Length 661;
 Indels
 0
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Gaps

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COMPUTER READABLE FORM:

MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/388,852B
FILING DATE: February 15, 1995
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CLHARACTERISTICS:
LENGTH: 661 amino acids
TYPE: amino acids
TYPE: amino acid
STRANUBEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
US-08-388-852B-2
Search completed: August 14, 2003, 09:08:00 Job time : 21.5 secs
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 US-08-388-852B-2
 TYPE: amino acid
STRANDEDNESS: Unkr
TOPOLOGY: Unknown
MOLECULE TYPE: Prote
IS-09-267-439-121
 Query Match
Best Local Similarity
Matches 8; Conserv
 Query Match
Best Local Similarity
Matches 8; Conserva
 Sequence 2, Application US/08388852B Patent No. 6500919
 GENERAL INFORMATION:
APPLICANT: Adema, Gosse Jan, Figdor, Carl Gustav.
TITLE OF INVENTION: Melanoma associated antigenic polypeptide,
TITLE OF INVENTION: epitopes thereof and vaccine against melanoma.
NUMBER OF SEQUENCES: 38
 TELEX: 421792
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
 CORRESPONDENCE ADDRESS:
 REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPHONE: (212) 751-6849
 STREET: Philips van Leyde
CITY: Nijmegen
STATE: Brabant
COUNTRY: the Netherlands
ZIP: 6525 EX
 ADDRESSEE:
 LENGTH:
 154 KTWGQYWQV 162
 154 KTWGQYWQV 162
 1 KTWGQYWAV 9
 KTWGQYWAV 9
 E: Adema, Gosse Jan, Figdor, Carl Gustav
Philips van Leydenlaan 25
 661
 Conservative
 Conservative
 Unknown
 Protein
 Unknown
 91.4%;
88.9%;
 91.4%; Score 53; DB 4; Length 661;
88.9%; Pred. No. 1.3;
tive 0; Mismatches 1; Indels
 121:
 Score 53; DB 3; Length 661; Pred. No. 1.3; o; Mismatches 1; Indels
 0
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 Gaps
 Gaps
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       | ë. |            |               |          |    | n<br>n            |   |          | . प्राप्त<br>१ - इंग्<br>इंग् | a. F     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                         |          |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | is it |    |            | ·             | at .     |    |                   |   |          |                               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | * #. | * · · · · · · · · · · · · · · · · · · · |          |
| A Control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |    |            |               |          |    |                   |   |          |                               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                         |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |    |            |               |          | Į. |                   |   |          |                               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                         |          |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |    |            |               |          |    |                   |   |          |                               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                         |          |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |    |            |               |          |    |                   |   |          |                               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | . *  |                                         | ***<br>* |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |    |            |               |          |    |                   |   |          |                               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | . *  |                                         | * 0      |
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| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |    |            |               |          |    |                   |   |          |                               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                         | · ·      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |    |            |               |          |    |                   |   |          |                               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                         |          |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |    |            |               |          |    |                   |   |          |                               |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                         |          |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |    |            |               |          | 11 | alle and a second |   |          | 2_                            | Commence | gia - 10. gia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |                                         |          |

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Minimum
Maximum
 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
 Total number of hits satisfying chosen parameters:
 Title:
Perfect score:
 Database :
 Searched:
 Scoring table:
 Sequence:
 Run on:
 OM protein -
 DB seq length: 0
DB seq length: 2000000000
 protein search, using sw model
 US-09-214-836-1
58
 13:
 492763 seqs, 131003257 residues
 BLOSUM62
 August 14, 2003, 09:07:19; Search time 153 Seconds (without alignments) 7.706 Million cell updates/sec
 Gapop 10.0 , Gapext 0.5
 KTWGQYWAV 9
 Copyright
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/ Cgn2_6/ptodata/1/pubpaa/US09C_FUBCOMB.pep:*
/ Cgn2_6/ptodata/1/pubpaa/US09C_FUBCOMB.pep:*
/ Cgn2_6/ptodata/1/pubpaa/US09_NEW_FUB.pep:*
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/ Cgn2_6/ptodata/1/pubpaa/US10_NEW_FUB.pep:*
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6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
 GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
 492763
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

| 15                | 14                | 13                | 12                | 11                | 10                | 9                 | 8                 | 7                 | 6                 | υī                | 4                 | ω                 | 2                | 1                 | Result<br>No.  |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|----------------|
| 53                | 53                | 53                | 53                | 53                | 53                | 53                | 53                | 53                | 53                | 53                | 53                | 53                | 53               | 53                | Score          |
| 91.4              | 91.4              | 91.4              | 91.4              | 91.4              | 91.4              | 91.4              | 91.4              | 91.4              | 91.4              | 91.4              | 91.4              | 91.4              | 91.4             | 91.4              | Query<br>Match |
| 661               | 661               | 661               | 92                | 10                | 9                 | 9                 | 9                 | 9                 | 9                 | 9                 | 9                 | 9                 | 9                | 9                 | Length         |
| 12                | 10                | 9                 | 14                | 12                | 15                | 15                | 15                | 14                | 14                | 12                | 10                | 10                | 10               | 9                 | BB             |
| US-09-898-860-121 | US-09-812-238B-2  | US-09-862-260A-2  | US-10-106-487-24  | US-09-898-860-47  | US-10-224-286-29  | US-10-161-097-27  | US-10-080-013-5   | US-10-047-539-5   | US-10-106-487-2   | US-09-898-860-46  | US-09-909-460-61  | US-09-766-889A-42 | US-09-923-831-30 | US-09-847-185-29  | ID             |
| Sequence 121, App | Sequence 2, Appli | Sequence 2, Appli | Sequence 24, Appl | Sequence 47, Appl | Sequence 29, Appl | Sequence 27, Appl | Sequence 5, Appli | Sequence 5, Appli | Sequence 2, Appli | Sequence 46, Appl | Sequence 61, Appl | Sequence 42, Appl | _                | Sequence 29, Appl | Description    |

## ALIGNMENTS

RESULT 1 US-09-847-185-29

Sequence 29, Application US/09847185
Patent No. US20020076392A1
GENERAL INFORMATION:
APPLICANY: SOO HOO, William
ITILE OF INVENTION:
MEMBRANE-BOUND CYTOKINE COMPOSITIONS
TITLE OF INVENTION:
RESPONSE USING SAME
NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS:
ADDRESSE: CAMPBELL & FLORES, LLP
STREET: 4370 La Jolia Village Drive, Suite 700
CITY: San Diego
STATE: California
COUNTRY: United States
ZIP: 92121
COMPUTER READABLE FORM:
MEDIUM TYPE: Florpy disk
COMPUTER READABLE FORM:
MEDIUM TYPE: Florpy disk
COMPUTER READABLE FORM:
APPLICATION NUMBER: US/09/847,185
FILING DATE: 01-May-2001
CLASSIFICATION NUMBER: US/09/847,185
FILING DATE: (Unknown)
APPLICATION NUMBER: 09/201,931
FILING DATE: (Unknown)
APPLICATION NUMBER: 31,815
REBREBUGE/DOCKET NUMBER: 9-IM 2442
TELECOMMUNICATION INFORMATION:
TELEPACK: (619)535-9001
TELEPACK: (619)535-9001
TELEPACK: (619)535-9001
TELEPACK: (619)535-901
INFORMATION FOR SEQ ID NO: 29:
SEQUENCE CHARACTERISTICS:

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 Query Match
Best Local Similarity
"her hes 8; Conserv:
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; ORGANISM: Homo sapiens
US-09-766-889A-42
 US-09-766-889A-42
 US-09-923-831-30
 US-09-847-185-29
 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 42
 SEQ ID NO 30
LENGTH: 9
 ORGANISM: Homo sapiens -09-923-831-30
 Matches
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 GENERAL INFORMATION:
 Sequence 30, Application US/09923831
Patent No. US20020115142A1
 PRIOR APPLICATION NUMBER: US 60/177,242
PRIOR FILING DATE: 2000-01-20
PRIOR APPLICATION NUMBER: US 60/243,212
PRIOR FILING DATE: 2000-10-25
 CURRENT APPLICATION NUMBER: US/09/923,831
CURRENT FILING DATE: 2001-08-07
PRIOR APPLICATION NUMBER: 09/183,706
PRIOR FILING DATE: 2001-10-30
NUMBER OF SEQ ID NOS: 43
 TYPE: PF
 NUMBER OF SEQ ID NOS: 59
 CURRENT APPLICATION NUMBER: US/09/766,889A
CURRENT FILING DATE: 2001-01-19
 APPLICANT: Demotte, Nathalie
APPLICANT: Schultz, Erwin
TITLE OF INVENTION: MAGE ANTIGENIC PEPTIDES
FILE REFERENCE: L0461/7104
 APPLICANT: De Smet, Charles
APPLICANT: Boon-Falleur, Thierry
TITLE OF INVENTION: TUMOR ASSOCIATED NUCLEIC ACIDS AND USES THEREFOR
FILE REFERENCE: L0461/7054
 APPLICANT: Luiten, Rosalie
 APPLICANT: Martelange, Val, rie APPLICANT: De Smet, Charles
 Local Similarity nes 8; Conserv
 MOLECULE TYPE: peptide SEQUENCE DESCRIPTION: SEQ ID NO: 29:
 INFORMATION:
 1 KTWGQYWAV 9
 2, Application US/09766889A
US20020164654A1
 KTWGQYWAV 9
 Boon-Falleur, Thierry
van der Bruggen, Pierre
Stroobant, Vincent
 LENGTH: 9 amino acids
 Conservative
 Conservative
 linear
 91.4%;
88.9%;
 91.4%;
88.9%;
 0
 ;
 Score 53;
Pred. No.
 Score 53; DB 9;
Pred. No. 4.4e+05
 Mismatches
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 WHICH BIND HLA-B35 AND HLA-B44
 Length 9;
 Length 9;
 Indels
 0;
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 Gaps
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 RESULT 5
US-09-898-860-46
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 US-09-909-460-61
 US-09-909-460-61
 Sequence 46, Application US/09898860 Publication No. US20030144482A1
 Matches
 Query Match
 SEQ ID NO 61
 Matches
 Sequence 61, Application US/09909460 Publication No. US20020182258A1
 Best Local Similarity
 Query Match
 GENERAL INFORMATION
 CURRENT APPLICATION NUMBER: US/09/909,460
CURRENT FILING DATE: 2001-07-18
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US/09/321,346
PRIOR FILING DATE: BARLIER FILING DATE: 1999-05-27
NUMBER OF SEQ ID NOS: 114
SOFTWARE: FastSEQ for Windows Version 3.0
 APPLICANT: Hedley, Mary Lynn
TITLE OF INVENTION: MICROPARTICLES FOR DELIVERY OF NUCLEIC
TITLE OF INVENTION: ACID
 FILE REFERENCE: 08191/014001
 APPLICANT: Lunsford, Lynn B. APPLICANT: Putnam, David
 LENGTH: 9
TYPE: PRT
ORGANISM: Homo sapiens
 Local Similarity
 APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-U11-2001
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
FILING DATE: «UNKNOWN»
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
 OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
CURRENT APPLICATION DATA:
 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
 CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P
 NUMBER OF SEQUENCES: 126
 TITLE OF INVENTION: MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
 1 KTWGQYWAV 9
 1 KTWGQYWAV 9
 8
 CITY: NEW YORK
STATE: NEW YORK
 ZIP: 10154
 COUNTRY: USA
 STREET:
PPLICATION NUMBER: US/08/231,565
 Conservative
 Conservative
 STEVEN A.
 345 PARK AVENUE
 91.4%;
 91.4%;
88.9%;

 Mismatches

 Score 53; DB 10;
Pred. No. 4.4e+05;
 Score 53; DB 10;
Pred. No. 4.4e+05;
 Length 9;
 Length 9;
 Indels
 0;
 <u>,</u>
 Gaps
 0
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FILING DATE: 22-APR-1994 ATTORNEY/AGENT INFORMATION:

REGISTRATION NUMBER: 37,341

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 US-10-047-539-5
 RESULT
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 RESULT 6
 US-09-898-860-46
 ; ORGANISM: Homo sapiens
US-10-106-487-2
Sequence 5, Application US/10047539
Publication No. US20020177547A1
GENERAL INFORMATION:
APPLICANT: MOLLING, KARIN
APPLICANT: PAVLOVIC, JOVAN
APPLICANT: NAWRATH, MICHAEL
 Sequence 2, Application US/10106487
Publication No. US20020164721A1
 Matches
 Query Match
Best Local Similarity
 SEQ ID NO 2
 Matches
 Query Match
Best Local Similarity
 TITLE OF INVENTION: HLA-A2.1 RESTRICTED HIV 1 SPECIFIC CTL RESPONSES USING TITLE OF INVENTION: HHD MICE FILE REFERENCE: 03495.0196 SEQUENCE LISTING CURRENT APPLICATION NUMBER: US/10/106,487

CURRENT FILLING DATE: 2002-03-27
 PRIOR APPLICATION NUMBER: 60/158,356
PRIOR FILING DATE: 1999-10-12
NUMBER OF SEQ ID NOS: 41
SOFTWARE: PatentIn Ver. 2.1
 PRIOR APPLICATION NUMBER: 09/675,673 PRIOR FILING DATE: 2000-09-29
 APPLICANT: FIRAT, HUSEYIN
APPLICANT: LEMONNIER, FRANCOIS
APPLICANT: LANGLADE-DEMOYEN, PIERRE
APPLICANT: MICHEL, MARIE-LOUISE
TITLE OF INVENTION: DESIGN OF A POLYEPITOPIC CONSTRUCT FOR THE INDUCTION
TITLE OF INVENTION: OF
 TELEX: 421792
INFORMATION FOR SEQ ID NO: 46:
SEQUENCE CHARACTERISTICS:
 ENGTH:
 TYPE: amino acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 46:
 REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
 INFORMATION
 8
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••
 KTWGQYWQV 9
 KTWGQYWAV 9
 ENGTH: 9
 Conservative
 Conservative
 91.4%;
88.9%;
 91.4%;
 0;
 0
 Score 53; DB 14;
Pred. No. 4.4e+05;
 Score 53; DB 12; Length 9; Pred. No. 4.4e+05;
 Mismatches
 Mismatches
 2026-4124US1
 DB 14; Length 9;
 Indels
 Indels
 0
 0
 Gaps
 Gaps
 0
 0;
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Query Match
Best Local Similarity
"hes 8; Conserva
 Query Match
Best Local Similarity
Anthes 8; Conservi
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 GENERAL INFORMATION:
APPLICANT: Moriarty, Ann
APPLICANT: Leturcq, Didie
APPLICANT: Degraw, Juli
APPLICANT: Heiskala, Mari
 ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-047-539-5
 US-10-161-097-27
 ; ORGANISM: Homo sapiens
US-10-080-013-5
 US-10-080-013-5
 RESULT 8
 FILE REFERENCE: VOS-27
CURRENT APPLICATION NUMBER: US/10/047,539
CURRENT FILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: EP 01 10 0914.9
PRIOR FILING DATE: 2001-01-16
NUMBER OF SEQ ID NOS: 13
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 5
 Sequence 27, Application US/10161097 Publication No. US20030096404A1 GENERAL INFORMATION:
 SOFTWARE: PatentIn version 3.1
SEQ ID NO 5
LENGTH: 9
 Sequence 5, Application US/10080013 Publication No. US20030077248A1
 APPLICANT: PYKETT, MARK J:
APPLICANT: SCADDEN, David T.
APPLICANT: SCADDEN, David T.
APPLICANT: POZNANSKY, MARK C.
TITLE OF INVENTION: LYMPHOID TISSUE-SPECIFIC CELL PRODUCTION
TITLE OF INVENTION: DEVICES
FILE OF INVENTION: DEVICES
FILE REFERENCE: C1005/7012/KA/ERG
CURRENT APPLICATION NUMBER: US/10/161,097
CURRENT FILING DATE: 2002-05-31
PRIOR APPLICATION NUMBER: US/09/574,749
 CURRENT APPLICATION NUMBER: US/10/080,013
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 42
 APPLICANT: Heiskala, Marja
APPLICANT: Peterson, Per
APPLICANT: Jackson, Michael
TITLE OF INVENTION: A CELL THERAPY METHOD FOR THE TREATMENT OF TUMORS
FILE REFERENCE: ORT-1557
 APPLICANT: ROSENZWEIG, Michael APPLICANT: PYKETT, Mark J:
 TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING TITLE OF INVENTION: CANCER
PRIOR FILING DATE:
 TYPE: PRT
 ENGTH:
 1 KTWGQYWAV 9
 KTWGQYWAV 9
 Leturcq, Didier
Degraw, Juli
 Conservative
 Conservative
 91.4%;
 91.4%;
 0;
 Score 53;
Pred. No.
 Score 53; DB 15;
Pred. No. 4.4e+05
 4.4e+05;
 4.4e+05
 DB 14;
 Length 9
 Length 9;
 Indels
 0
 0
 Gaps
 Gaps
 0
 0
```

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RESULT 10
US-10-224-286-29
; Sequence 29, Application US/10224286
; Publication No. US20030108517A1
; GENERAL INFORMATION:
 밁
 ş
 ; OTHER INFORMATION: Homo Sapiens source US-10-161-097-27
 US-10-224-286-29
Query Match
Best Local Similarity bo..
 Matches
 Query Match
Best Local S
 SEQ ID NO 27
 PRIOR FILING DATE: 1998-11-12
PRIOR APPLICATION NUMBER: PCT/US99/26795
PRIOR FILING DATE: 1999-11-12
PRIOR APPLICATION NUMBER: US 09/524,749
PRIOR FILING DATE: 2000-05-18
 NUMBER OF SEQ ID NOS: 58
SOFTWARE: FastSEQ for Windows Version 3.0
 PRIOR APPLICATION NUMBER: US 60/107,972
 LENGTH: 9
TYPE: PRT
ORGANISM: Artificial Sequence
 INFORMATION FOR SEQ ID NO: 29: SEQUENCE CHARACTERISTICS:
 FEATURE:
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/902,516
APLICATION STEEL 29-UUL-1997
ATTORNEY/AGENT INFORMATION:
 COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
 MOLECULE TYPE: peptide SEQUENCE DESCRIPTION: 9
 REFERENCE/DOCKET NUMBER: P-IM 2442
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619)535-9001
 APPLICANT: SOO HOO, WILLIAM
TITLE OF INVENTION: MEMBRANE-BOUND CYTOKINE COMPOSITIONS
COMPRISING GM-CSF AND METHODS OF MODULATING AN IMMUNE
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES:
 Similarity
8; Conserv
 TOPOLOGY: linear
 NAME: Campbell, Cathryn A. REGISTRATION NUMBER: 31,815
 APPLICATION NUMBER: US/10/224,286
FILING DATE: 19-Aug-2002
CLASSIFICATION: <Unknown>
 ADDRESSEE: CAMPBELL & FLORES, LLP STREET: 4370 La Jolla Village Drive, Suite 700
 KTWGQYWAV
 COUNTRY: United States
 TELEFAX: (619)535-8949
 CITY: San Diego
 LENGTH: 9 amino acids
 Conservative
 amino acid
 California
 91.4%;
88.9%;
 91.4%;
 RESPONSE USING SAME
 SEQ ID NO:
 0,
 <u>.</u>
 Score 53;
Pred. No.
 Score 53; DB 15;
Pred. No. 4.4e+05;
0; Mismatches 1
 Mismatches
 29:
 4.4e+05;
 DB 15; Length 9;
 Length 9;
 Indels
 0,
 0
 Gaps
 Gaps
 0
 0
```

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RESULT 12
US-10-106-487-24
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 RESULT 11
US-09-898-860-47
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 US-09-898-860-47
 Sequence 47, Application US/09898860 Publication No. US20030144482A1 GENERAL INFORMATION:
 Query Match
Best Local Similarity
Matches 8; Conserv
 TELEX: 421792
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
 APPLICATION NUMBER: US/08/231,565 FILING DATE: 22-APR-1994 ATTORNEY/AGENT INFORMATION:
 REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
TELECOMMUNICATION INFORMATION:
 APPLICATION NUMBER: US/09/898,860 FILING DATE: 03-Jul-2001 PRIOR APPLICATION DATA:
 ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
 TOPOLOGY: Unknown MOLECULE TYPE: Peptide
 CURRENT APPLICATION DATA:
 SEQUENCE DESCRIPTION: SEQ ID NO: 47:
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES: 126
 TITLE OF INVENTION: MELANOMA ANTIGENS AND
THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
 KTWGQYWAV 9
 APPLICATION NUMBER: US/09/267,439
FILING DATE: «Unknown»
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
 COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
 CITY: NEW YORK
STATE: NEW YORK
 STRANDEDNESS: Unknown
 TYPE: amino acid
 TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
 NAME: CAROL M. GRUPPI
 STREET:
 ADDRESSEE: MORGAN & FINNEGAN, L.L.P
 ENGTH: 10
 Conservative
 STEVEN A.
 345 PARK AVENUE
 91.4%;
88.9%;
 0,
 Score 53; DB 12;
Pred. No. 0.082;
0; Mismatches 1
 Length 10;
 0
 Gaps
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Sequence 24, Application US/10106487
Publication No. US20020164721A1
GENERAL INFORMATION:
APPLICANT: FIRAT, HUSEYIN

0;

LEMONNIER, FRANCOIS

```
RESULT 14
US-09-812-238B-2
 В
 á
 US-09-862-260A-2
 밁
 ঠ
 US-09-862-260A-2
 RESULT 13
 Sequence 2, Application US/09812238B
Patent No. US20020169132A1
GENERAL INFORMATION:
APPLICANT: Nicolette, Charles
TITLE OF INVENTION: THERAPEUTIC ANTI-MELANOMA COMPOUNDS
FILE REFERENCE: GZ 2094.00
CURRENT APPLICATION UNMBER: US/09/812,238B
CURRENT FILING DATE: 2002-05-21
NUMBER OF SEQ ID NOS: 19
 Best Loc
Matches
 Sequence 2, Application US/09862260A Patent No. US20020082217A1 GENERAL INFORMATION:
 Matches
 Query Match
 SEQ ID NO 2
 SEQ ID NO 24
LENGTH: 92
 Query Match
 PRIOR APPLICATION NUMBER: 60/267,877
PRIOR FILING DATE: 2001-02-09
NUMBER OF SEQ ID NOS: 23
SOFTWARE: FastSEQ for Windows Version 4.0
 APPLICANT: Nicolette, Charles A.
TITLE OF INVENTION: THERAPEUTIC ANTI-MELANOMA COMPOUNDS
FILE REFERENCE: 126881210200
CURRENT APPLICATION NUMBER: US/09/862,260A
CURRENT FILING DATE: 2001-05-21
 TYPE: PRT
ORGANISM: Homo sapiens
-10-106-487-24
 TITLE OF INVENTION: HLA-A2.1 RESTRICTED HIV 1 SPECIFIC CTL RESPONSES USING TITLE OF INVENTION: HHD MICE FILE REFERENCE: 03495.0196 SEQUENCE LISTING CURRENT APPLICATION NUMBER: US/10/106,487 CURRENT FILING DATE: 2002-03-27 CURRENT FILING DATE: 2002-03-27 PRIOR APPLICATION NUMBER: 09/675,673
 PRIOR APPLICATION NUMBER: 60/208,955
PRIOR FILING DATE: 2000-05-31
 SOFTWARE: PatentIn Ver. 2.1
 PRIOR APPLICATION NUMBER: 60/158,356
PRIOR FILING DATE: 1999-10-12
NUMBER OF SEQ ID NOS: 41
 LENGTH: 661
TYPE: PRT
ORGANISM: Homo sapiens
 PRIOR FILING DATE: 2000-09-29
 FITLE OF INVENTION:
 y Match 91.4%;
Local Similarity 88.9%;
hes 8; Conservative
 Local Similarity
 38
 T: LANGLADE-DEMOYEN, PIERRE

T: MICHEL, MARIE-LOUISE
INVENTION: DESIGN OF A POLYEPITOPIC CONSTRUCT FOR THE INDUCTION
INVENTION: OF
 1 KTWGQYWAV 9
FastSEQ for Windows Version 3.0
 KTWGQYWQV 162
 KTWGQYWQV 46
 KTWGQYWAV 9
 Conservative
 91.4%;
88.9%;
 0; Mismatches
 Score 53; DB 1
Pred. No. 0.53;
 Score 53; DB Pred. No. 2.8;
 Mismatches
 DB 9;
 DB 14; Length 92;
 Length 661;
 Indels
 Indels
 0
 0;
 Gaps
 Gaps
 0
 0;
```

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TOPOLOGY: Unknown;

MOLECULE TYPE: Protein;

SEQUENCE DESCRIPTION: SEQ ID NO: 121: US-09-898-860-121
 Query Match
Best Local Similarity
5
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 RESULT 15
US-09-898-860-121
 US-09-812-238B-2
 Query Match
Best Local Similarity
Matches 8; Conserv
 Sequence 121, Application US/09898860
Sequence 121, Application US/09898860
Publication No. US20030144482A1
GENERAL IMPORMATION:
GENERAL IMPORMATION: KAWAKAMI, YUTAKA; ROSENBERG,
 SEQ ID NO 2
LENGTH: 661
TYPE: PRT
ORGANISM: Homo sapiens
 TELEX: 421792
INFORMATION FOR SEQ ID NO: 121:
SEQUENCE CHARACTERISTICS:
 APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
 MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/09/898,860
FILING DATE: 03-Jul-2001
 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
FILING DATE: <Unknown>
 ZIP: 10154
COMPUTER READABLE FORM:
 TITLE OF INVENTION: MELANOMA ANTIGENS AND THERAPEUTIC
 TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES:
 154 KTWGQYWQV 162
 1 KTWGQYWAV 9
KTWGQYWAV 9
 STATE: NEW YORK COUNTRY: USA
 TYPE: amino acid
STRANDEDNESS: Unknown
 REFERENCE/DOCKET NUMBER:
 NAME: CAROL M. GRUPPI
 CITY: NEW YORK
 REGISTRATION NUMBER: 37,341
 ENGTH: 661
 TELEFAX: (212) 751-6849
 ADDRESSEE: MORGAN & FINNEGAN, L.L.P
 Conservative
 Conservative
 STEVEN A.
 345 PARK AVENUE
 91.4%;
88.9%;
 91.4%;
 METHODS
 126
 0
 0; Mismatches
 Score 53; I
Pred. No. 2.
 Score 53; DB
Pred. No. 2.8;
 Mismatches
 2026-4124US1
 DB
2.8;
 12;
 10;
 1;
 Length 661
 Length 661;
 Indels
 0
 0
 Gaps
 Gaps
 0
 0
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154 KTWGQYWQV 162

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; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 668
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-047-539-4
 RESULT 18
US-09-898-860-27
 밁
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 Query Match
Best Local Similarity
"Arches 8; Conserve
 ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-207-655-77
 RESULT 16
US-10-207-655-77
 US-10-047-539-4
 Sequence 27, Application US/09898860 Publication No. US20030144482A1 GENERAL INFORMATION:
 Query Match 91.4%;
Best Local Similarity 88.9%;
Matches 8; Conservative
 SEQ ID NO 77
LENGTH: 661
 Sequence 77, Application US/10207655
Publication No. US20030118592A1
GENERAL INFORMATION:
 Sequence 4, Application US/10047539
Publication No. US20020177547A1
GENERAL INFORMATION:
 APPLICANT: PAVLOVÍC, JOVAN
APPLICANT: NAWRATH, MICHAEL
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING
TITLE OF INVENTION: CANCER
 CURRENT APPLICATION NUMBER: US/10/207,655
CURRENT FILING DATE: 2002-07-25
 APPLICANT: Hayden-Ledbetter, Martha S.
TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
FILE REFERENCE: 390069.401C1
 PRIOR APPLICATION NUMBER: EP 01 10 0914.9
PRIOR FILING DATE: 2001-01-16
NUMBER OF SEQ ID NOS: 13
 CURRENT APPLICATION NUMBER: US/10/047,539
CURRENT FILING DATE: 2002-01-15
 APPLICANT: MOLLING, KARIN
APPLICANT: PAVLOVIC, JOVI
APPLICANT: NAWRATH, MICH
 NUMBER OF SEQ ID NOS: 426
SOFTWARE: PatentIn version 3.0
 APPLICANT: Ledbetter, Jeffrey A.
APPLICANT: Hayden-Ledbetter, Martha S.
 FILE REFERENCE: VOS-27
 TITLE OF INVENTION: MELANOMA ANTIGENS AND
THERAPEUTIC
 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
NUMBER OF SEQUENCES: 126
 154 KTWGQYWQV 162
 154 KIWGQYWQV 162
 1 KTWGQYWAV 9
 1 KTWGQYWAV 9
 Conservative
 STEVEN A.
 91.4%;
 METHODS
 Score 53; DB Pred. No. 2.8;
 Score 53; DB 15;
Pred. No. 2.8;
 0
 Mismatches
 DB 14; Length 668;
 Length 661;
 Indels
 0
 Gaps.
 0;
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 SEQUENCE DESCRIPTION: SEQ ID NO: US-09-898-860-27
 ; ORGANISM: Homo sapiens US-10-047-539-8
 RESULT 19
 US-10-047-539-8
 SOFTWARE: |
SEQ ID NO 8
 Sequence 8, Application US/10047539 Publication No. US20020177547A1
 Matches
Query Match
 GENERAL INFORMATION:
 Query Match
 APPLICANT: NAWRATH, MICHAEL
APPLICANT: NAWRATH, MICHAEL
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING
TITLE OF INVENTION: CANCER
FILE REFERENCE: VOS-27
CURRENT PEPLICATION NUMBER: US/10/047,539
CURRENT FILING DATE: 2002-01-15
 PRIOR APPLICATION NUMBER: EP 01 10 0914.9 PRIOR FILING DATE: 2001-01-16
 NUMBER OF SEQ ID NOS: 13
 APPLICANT: MOLLING, KARIN
 TYPE: PRT
 TELEX: 421792
INFORMATION FOR SEQ ID NO: 27:
SEQUENCE CHARACTERISTICS:
 LENGTH:
 Local
 APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-U1-2001
PRIOR APPLICATION DATA:
 CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
 TYPE: amino acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: Protein
 TELECOMMUNICATION INFORMATION:
 COMPUTER READABLE FORM:
 154 KTWGQYW 160
 1 KTWGQYW 7
 Similarity 100.
7; Conservative
 PatentIn Ver. 2.1
 COMPUTER: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
 NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
 APPLICATION NUMBER: US/09/267,439 FILING DATE: <Unknown>
 LENGTH: 661
 TELEPHONE: (212)
 (212) /50
(212) 751-6849
 86.2%;
100.0%;
 84.5%;
 <u>,</u>
 Score 50;
Pred. No.
 Score 49;
 Mismatches
 DB 12; Length 661; 7.7;
 DB 14;
Length 9;
 Indels
 0;
 Gaps
 0,
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RESULT 21
US-09-898-860-71
 ; LENGTH: 626
; TYPE: PRT
; ORGANISM: Mus musculus
US-10-047-539-2
 US-10-047-539-2
 RESULT 20
 Sequence 71, Application US/098 Publication No. US20030144482A1 GENERAL INFORMATION:
 Matches
 SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
 Sequence 2, Application US/10047539 Publication No. US20020177547A1 GENERAL INFORMATION:
 Query Match
 CURRENT APPLICATION NUMBER: US/10/047,539
CURRENT FILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: EP 01 10 0914.9
PRIOR FILING DATE: 2001-01-16
NUMBER OF SEQ ID NOS: 13
 Best Local
 APPLICANT: MOLLING, KARIN
APPLICANT: PAVLOVIC, JOVAN
APPLICANT: NAWRATH, MICHAEL
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS FOR TREATING OR PREVENTING
TITLE OF INVENTION: CANCER
FILE REFERENCE: VOS-27
 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/898,860
APPLICATION NUMBER: US/09/898,860
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
FILING DATE: <Unknown;
APPLICATION NUMBER: US/08/417,174
APPLICATION NUMBER: US/08/417,174
APPLICATION NUMBER: US/08/231,565
 Local Similarity
 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
 CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
 NUMBER OF SEQUENCES:
 TITLE OF INVENTION: MELANOMA ANTIGENS AND
 APPLICANT:
 154 KTWCKYWQV 162
 1 KTWGQYWAV 9
 Similarity
 7; Conservative
 STREET: 345 PARK ÄVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
 OPERATING SYSTEM: PC-DOS/MS-DOS
 COMPUTER: IBM PC COMPATIBLE
 ZIP: 10154
 KTWGQYWAV 9
 Application US/09898860
 Conservative
 KAWAKAMI, YUTAKA; ROSENBERG,
 STEVEN A.
 84.5%;
77.8%;
 77.8%;
 126
 Score 49; DB
Pred. No. 10;
 Pred. No. 4.4e+05;
1; Mismatches 1
 USE IN DIAGNOSTIC AND THERAPEUTIC
 Mismatches
 DB 14;
 1; Indels
 Length 626;
 Indels
 0
 0;
 Gaps
 Gaps
 0;
 0,
 밁
 RESULT 22
US-09-898-860-72
 US-09-898-860-71
 Sequence 72, Application US/09898860 Publication No. US20030144482A1 GENERAL INFORMATION:
 Query Match
Best Local
 Matches
 TELEX: 421792
INFORMATION FOR SEQ ID NO: 72:
 TELEX: 421792
INFORMATION FOR SEQ ID NO: 71:
 SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-Jul-2001
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/09/267,439
FILING DATE: <UNknown>
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
 Local Similarity
les 7; Conserv
 ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
 TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 71:
 SEQUENCE CHARACTERISTICS:
 TELECOMMUNICATION INFORMATION:
 CORRESPONDENCE ADDRESS:
 NUMBER OF SEQUENCES: 126
 TITLE OF INVENTION: MELANOMA ANTIGENS AND THERAPEUTIC
 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG
 SEQUENCE CHARACTERISTICS:
 TELECOMMUNICATION INFORMATION:
 ATTORNEY/AGENT INFORMATION:
 2 TWGQYWAV 9
 REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
 OPERATING SYSTEM: PC-DOS/MS-DOS
 STATE: NEW YORK
 REGISTRATION NUMBER: 37,341
REFERENCE/DOCKET NUMBER: 2026-4124US1
 TYPE: amino acid
 COUNTRY: USA
 CITY: NEW YORK
 STREET: 345 PARK AVENUE
 TYPE: amino acid
STRANDEDNESS: Unknown
 NAME: CAROL M. GRUPPI
STRANDEDNESS: Unknown
 TELEPHONE:
 NAME: CAROL M. GRUPPI
 TELEPHONE: (212) 758-48
TELEFAX: (212) 751-6849
 TELEFAX: (212) 751-6849
 ADDRESSEE: MORGAN & FINNEGAN, L.L.P
 ENGTH: 9
 Conservative
 STEVEN A.
 82.8%;
 (212) 758-4800
 METHODS
 758-4800
 Score 48; DB 12;
Pred. No. 4.4e+05;
 Length 9;
 Indels
 0,
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; STRANDEDNES: UNKNOWN; TOPOLOGY: Unknown; MOLECULE TYPE: Peptide SEQUENCE DESCRIPTION: SEQ ID NO: US-09-898-860-73
 MOLECULE TYPE Peptide ; SEQUENCE DESCRIPTION: SEQ ID NO: US-09-898-860-72
밁
 Ś
 US-09-898-860-73
Sequence 73, Application US/09898860
Publication No. US20030144482A1
GENERAL INFORMATION:
 밁
 RESULT 23
 Query Match
Best Local S
Matches 7
 Matches
 Query Match
Best Local
 TELEX: 421792
INFORMATION FOR SEQ ID NO: 73:
SEQUENCE CHARACTERISTICS:
 APPLICATION NUMBER: US/09/267,439
FILING DATE: «Unknown»
APPLICATION NUMBER: US/08/417,174
FILING DATE: 05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-Jul-2001
PRIOR APPLICATION DATA:
 REFERENCE/DOCKET NUMBER: 2026-4124US1 TELECOMMUNICATION INFORMATION:
 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
 STEVEN A.
TITLE OF INVENTION: MELANOMA ANTIGENS AND
 CORRESPONDENCE ADDRESS: MORGAN & FINNEGAN, L.L.P
 NUMBER OF SEQUENCES:
 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
 7; Conserv
 Similarity 87.177; Conservative
 TWGQYWAV 9
 COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII
 TYPE: amino acid
 NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
 STREET: 345 PARK AVENUE CITY: NEW YORK
 TOPOLOGY: Unknown
 TELEFAX:
 TELEPHONE: (212) 758-48
TELEFAX: (212) 751-6849
 STATE: NEW YORK
 LENGTH: 9
 Conservative
 82.8%;
 82.8%;
 METHODS
 THEIR USE IN DIAGNOSTIC AND THERAPEUTIC
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 Score 48;
Pred. No.
 Score 48; DB 12;
Pred. No. 4.4e+05;
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 73:
 4.4e+05;
 DB 12; Length 9;
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 Indels
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RESULT 25
US-09-998-860-75
; Sequence 75, Application US/09898860
; Publication No. US20030144482A1
; GENERAL INFORMATION:
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 US-09-898-860-74
 RESULT 24
US-09-898-860-74
 Query Match
Best Local Similarity
Matches 7; Conserv
 Sequence 74, Application US/09898860 Publication No. US20030144482A1
 TELEX: 421792
INFORMATION FOR SEQ ID NO: 74:
SEQUENCE CHARACTERISTICS:
 GENERAL INFORMATION:
 PRIOR APPLICATION DATA:

APPLICATION UNMBER: US/09/267,439
APPLICATION NUMBER: US/08/417,174
FILING DATE: <05-APR-1995
APPLICATION NUMBER: US/08/231,565
FILING DATE: 22-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CAROL M. GRUPPI
REGISTRATION NUMBER: 37,341
REGISTRATION INFORMATION:
REFERENCE/DOCKET NUMBER: 2026-4124US
TELECOMMUNICATION INFORMATION:
TELECHONE: (212) 758-4800
 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/898,860
FILING DATE: 03-Jul-2001
NUMBER OF SEQUENCES: 126 CORRESPONDENCE ADDRESS:
 TITLE OF INVENTION: MELANOMA ANTIGENS AND THEIR USE IN DIAGNOST
 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, STEVEN A.
 TOPOLOGY: Unknown
MOLECULE TYPE: Peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 74:
 CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
 TITLE OF INVENTION: MELANOMA ANTIGENS AND
THER USE IN DIAGNOSTIC AND THERAPEUTIC
 NUMBER OF SEQUENCES: 126
 APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG,
 2 TWGQYWAV 9
 2 TWGQYWQV 9
 CITY: NEW YORK
STATE: NEW YORK
 STRANDEDNESS: Unknown
 TYPE: amino acid
 TELEPHONE: (212) 758-48
TELEFAX: (212) 751-6849
 LENGTH: 9
 STREET:
 Conservative
 345 PARK AVENUE
 USA
 82.8%;
87.5%;
 METHODS
 Score 48; DB 12;
Pred. No. 4.4e+05;
); Mismatches 1
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STREET; 345 PARK AVENUE

STREET; 345 PARK AVENUE

CITY, NEW YORK

STATE: NEW YORK

STATE: NEW YORK

STATE: NEW YORK

COUNTY: USA

COUNTY: LOCATION DATA:

COUNTY: APPLICATION NUMBER: US/09/898,860

FILING DATE: 03-711-2001

PRIOR APPLICATION NUMBER: US/09/827,439

FILING DATE: 05-APR-1995

APPLICATION NUMBER: US/09/821,565

FILING DATE: 05-APR-1995

APPLICATION NUMBER: US/09/821,565

FILING DATE: 05-APR-1995

APPLICATION NUMBER: 37-341

ERFERENCE DOCKET NUMBER: 37-341

REFERENCE DOCKET NUMBER: 37-341

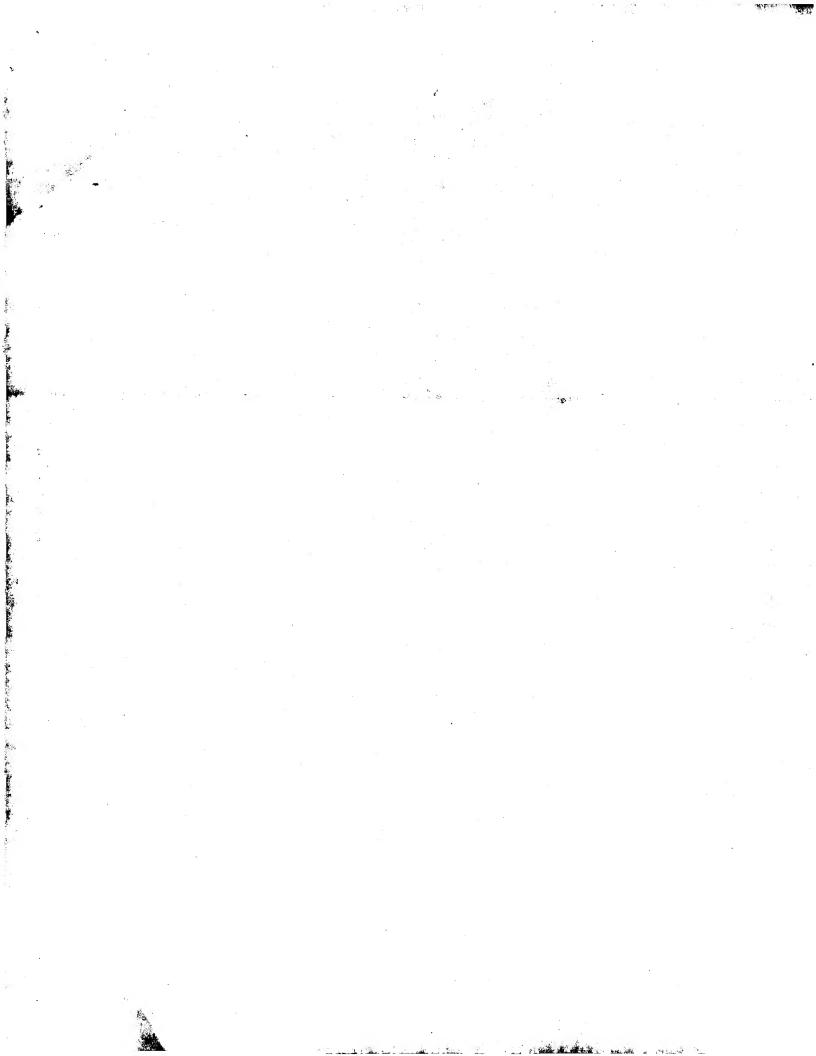
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TELEPHONE: (212) 758-8600

TELEPHONE: (212)
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Result
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 Total number
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Perfect score:
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 Post-processing:
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 length:
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 US-09-214-836-1
58
 283308 segs, 96168682 residues
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Maximum Match 100%
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3: pir3:*
4: pir4:*

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 KTWGQYWAV 9
 Copyright
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 Length
 2000000000
GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd
 B
 138400
A41234
S53871
AI1014
 D88486
S46301
A75530
B70750
A39862
A84432
E96648
C844332
 S52775
S76446
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T07314
 ij
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 F91017
 SUMMARIES
 model
 cell updates/sec
 probable peptide/a hypothetical prote histidine transpor
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 probable outer mem probable outer mem protein F20H11.2 [
 cytochrome c-type conserved hypothet
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|            | 45                | 44                 | 43                | 42                 | 41                 | 40                 | 39                 | 38                 | 37                 | 36                 | 35                | 34                 | ա<br>ա             | 32                | 31                | 30                |  |
|------------|-------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|-------------------|-------------------|-------------------|--|
|            | 37                | 37                 | 37                | 37                 | 37                 | 37                 | 38                 | 38                 | 38                 | 38                 | 38                | 38                 | 38                 | 38                | 38                | 38                |  |
|            | 63.8              | 63.8               | 63.8              | 63.8               | 63.8               | 63.8               | 65.5               | 65.5               | 65.5               | 65.5               | 65.5              | 65.5               | 65.5               | 65.5              | 65.5              | 65.5              |  |
|            | 306               | 301                | 293               | 277                | 241                | 240                | 936                | 936                | 622                | 569                | 290               | 290                | 290                | 277               | 277               | 277               |  |
|            | ш                 | N                  | N                 | N                  | N                  | ш                  | N                  | N                  | N                  | N                  | N                 | N                  | N                  | N                 | N                 | N                 |  |
| ALIGNMENTS | 825309            | D82040             | T11969            | AH0811             | T37005             | JS0591             | H71862             | B64567             | H64447             | T22928             | JC2316            | C86097             | G91256             | B85885            | AF0366            | G91040            |  |
|            | cytochrome c-type | cysQ protein VC272 | cytochrome c-type | sulphate transport | endo-1,4-beta-xyla | endo-1,4-beta-xyla | probable cytochrom | cytochrome c bioge | hypothetical prote | hypothetical prote | 4-hydroxybenzoate | 4-hydroxybenzoate- | 4-hydroxybenzoate- | sulfate transport | sulfate transport | sulfate transport |  |

N;Alternate names: melanoma antigen 25
C;Species: Homo sapiens (man)
C;Date: 01-Nov-1996 #sequence revision 01-Nov-1996 #text\_change 01-Dec-2000
C;Accession: 138400; A53668; A55753
R;Maresh, G.A.; Marken, J.S.; Neubauer, M.; Aruffo, A.; Hellstrom, I.; Hellstrom, K.;
DNA Cell Biol. 13, 87-95, 1994
A;Title: Cloning and expression of the gene for the Melanoma-Associated ME20 Antigen.
A;Reference number: 138400; MUID:94235165; PMID:8179825
A;Accession: 138400

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melanoma-associated ME20 antigen

(me20m) gen 25

human

**I38400** RESULT 1

A;Cross-references: EMBL:U01874; NID:g494939; PIDN:AAA18479.1; PID:g494940 R;Adema, G.J.; de Boer, A.J.; Vogel, A.M.; Loenen, W.A.M.; Figdor, C.G. J. B101. Chem. 269, 20126-20133, 1994 A;Title: Molecular characterization of the melanocyte lineage-specific antigen A;Reference number: A53668; MUID:94327568; PMID:7519602

gp100

conceptual translation

tumor-infiltrating

- lymg

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Appella, E.;

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A; Molecule type: mRNA A; Residues: 1-662 < RES>

A;Status: preliminary; translated from GB/EMBL/DDBJ

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QRECST
 sulfate/thiosulfat
melanocyte-specific protein Pmel-17 precursor - human

C;Species: Homo sapiens (man)

C;Species: 19-Jun-1992 #sequence_revision 19-Jun-1992 #text_change 30-Sep-1993

C;Accession: A41234

R;Kwon, B.S.; Chintamaneni, C.; Kozak, C.A.; Copeland, N.G.; Gilbert, D.J.; Jenkins, Proc. Natl. Acad. Sci. U.S.A. 88, 9228-9232, 1991

Proc. Natl. Acad. Sci. U.S.A. 88, 9228-9232, 1991

A;Title: A melanocyte-specific gene, Pmel 17, maps near the silver coat color locus of the second color locus of
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 A; Molecule type: mRNA
A; Residues: 1-161, 'F',
C; Keywords: glycoprote
 A;Cross-references: GB:S73003; NID:g639589; PIDN:AAC60634.1; PID:g639590 R;Kawakami, Y.; Eliyahu, S.; Delgado, C.H.; Robbins, P.F.; Sakaguchi, K. Proc. Natl. Acad. Sci. U.S.A. 91, 6458-6462, 1994 A;Title: Identification of a human melanoma antigen recognized by tumor-
 A41234
 RESULT
 A;Status: nucleic acid sequence not shown; not
 A;Reference number: A55753; MUID:94294401; PMID:8022805
A;Accession: A55753
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 Matches
 N
 Local
 154
 1 KTWGQYWAV
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 1-161, 'F', 163-592, 594-662 <KAW>
 Similarity 88.9
8; Conservative
 KTWGQYWQV 162
 ø
 91.4%;
88.9%;
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 Score 53; I
Pred. No. 1.
 ore 53; DB
ed. No. 1.2;
Mismatches
 maps near the silver coat color locus on
 compared with
 2;
 1;
 Length 662;
 Indels
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E. Choi

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Nature 413, 848-852, 2001
Nature 413, 848-852, 2001
A;Authors: Parry, C.; Quail, M.; Rutherford, K.;
A;Authors: ornome sequence of a multiple d
 R;Kwon, B.S.; Halaban, R.; Ponnazhagan, S.; Kim, K.; Chintamaneni, C.; Bennett, D.; Nucleic Acids Res. 23, 154-158, 1995
A;Title: Mouse silver mutation is caused by a single base insertion in the putative A;Reference number: $53871; MUID:95175358; PMID:7870580
A;Accession: $53871
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 A;Reference number: AB0502; MUID:21534947; PMID:11677608
A;Accession: AI1014
 4-hydroxybenzoate octaprenyl transferase [imported] - Salmonella enterica sı C;Species: Salmonella enterica subsp. enterica serovar Typhi A;Note: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 18-Nov-2002
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 A;Reference number: A41234; MUID:92021023; PMID:1924386 A;Accession: A41234
 R;Parkhill, J.; Dougan, G.; James, K.D.; th, T.; Connerton, P.; Cronin, A.; Davis,
 Pmel 17 protein - mouse
 S5387
 A; Cross-references: GB:M77348
 A; Molecule type: mRNA
 A; Cross-references:
 A;Residues:
 A; Molecule type: mRNA
 C;Accession: S53871
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Date: 27-Oct-1995 #sequence_revision
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Best Local
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 154
 preliminary
 237
 154
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7; Conserva
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8; Conserv
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 WGYYWAV 243
 KTWGQYWAV
 KTWGQYWAV 9
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 Conservative
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 Conservative
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 91.4%;
88.9%;
 72.4%;
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 Score 42;
Pred. No.
 Score 49;
Pred. No.
 Score 53;
Pred. No.
 Mismatches
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 Thomson, N.R.; Pickard, P.; Davies, R.M.; Dowd,
 4.4;
 PIDN:AAA69538.1; PID:g887941
 DB
1.2;
 DB 2;
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 Simmonds, M.;
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 Length 290;
 Length 626;
 Length 668;
 Salmonella enterica subsp.
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 Skelton, J.; Stevens, K. Salmonella enterica sero
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A; Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Gallert lech, J.; Harwood, C.R.; Henaut, A., Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F.; Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Lardinois, A.; Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Maueel, Y., M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetelle, Rieger, M.; Rivolta, C.; Rocha, E.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanlon, A.; Authors: Schleich, S.; Schroeteer, R.; Scoffone, F.; Sekiguchi, J.; Sekowska, A.; Seror, A.; Winters, P.; Wipatch, A.; Tanaka, T.; Terpstra, P.; Tognoni, A.; Tosato, V.; Uchiyama, M.; Winters, P.; Wipatch, A.; Yamamoto, H.; Yamame, K.; Yasumoto, K.; Yata, K.; Yoshida, K.; Aluthors: Yoshikawa, H.F.; Zumstein, E.; Yoshikawa, H.; Danchin, A.
A;Title: The complete genome sequence of the Gram-positive bacterium Bacillus subtilis. A.; Reference number: A69580; MUID:98044033; PMID:9384377
 R;Wakasugi, T.; Nagai, T.; Kapoor, M.; Sugita, M.; Ito, M.; Ito, Proc. Natl. Acad. Sci. U.S.A. 94, 5967-5972, 1997
A;Title: Complete nucleotide sequence of the chloroplast genome: A;Reference number: Z15985, MUID:97303241; PMID:9189184
A;Accession: T07314
A;Genome: chloroplast C;Superfamily: cytochrome C;Keywords: chloroplast
 cytochrome c-type synthesis protein homolog - Chlorella vulgaris chloroplast C;Species: chloroplast Chlorella vulgaris
C;Date: 14-May_1999 #sequence_revision 14-May-1999 #text_change 21-Jul-2000
 A;Status: preliminary; nucleic acid sequence not shown; translation not A;Molecule type: DNA A;Residues: 1-305 <KUN>
 C;Accession: C69708; T44770
R;Kunst, F.; Ogasawara, N.; Moszer, I.; Albertini, A.M.; Alloni, G.; Azevedo, V.; Ber C.; Bron, S.; Brouillet, S.; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; A.; Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, Nature 390, 249-256, 1997
 A;Cross-references: EMBL:AB001684; NID:g2224352; PIDN:BAA57962.1;
 A; Molecule type: DNA
A; Residues: 1-315 < W
 A; Status: translated from
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 A;Gene:
 A; Experimental source:
 A;Molecule type: DNA
A;Residues: 1-305 <MOR>
 J. Bacteriol. 178, 6059-6063, 1996
A;Title: A gene (sleB) encoding a spore cortex-lytic enzyme
A;Reference number: Z22836; MUID:96427343; PMID:8830707
 R;Moriyama, R.;
 A; Accession: C69708
 C;Species: Bacillus subtills
C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 21-Jul-2000
 spore cortex-lytic enzyme prepeptide [imported] - Bacillus subtilis
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 A; Accession: T44770
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;Experimental source: strain 1
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 Hattori, A.; Miyata, S.; Kudoh, S.; Makino,
78, 6059-6063, 1996
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 168
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Best Local Similarity

72.4**%**; 62.5**%**;

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DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7
A:Reference number: A99629; MUID:21156231; PMID:11258796
 R;Chambaud, I.; Heilig, R.; Ferris, S.; Barbe, V.; Samson, D.; Galisson, F.; Moszer, I.; Nucleic Acids Res. 29, 2145-2153, 2001
A;Title: The complete genome sequence of the murine respiratory pathogen Mycoplasma pulm A;Reference number: A99512; MUID:21267165; PMID:11353084
A;Accession: H90530
 H85861
 A; Molecule type: DNA
A; Residues: 1-264 <HAY>
 A; Reference number: A99629; A; Accession: F91017
 R;Hayashi,
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 hypothetical protein Z3480 [imported] - C; Species: Escherichia coli
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A;Experimental source: strain O157:H7, substrain RIMD 0509952
 A;Status: preliminary
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 A;Genetic code:
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 ;Species: Mycoplasma pulmonis;Date: 24-May-2001 #text_change 03-Aug-2001;Date: 24-May-2001
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 ;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 18-Jul-2001
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 ETWGNYWS 250
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 Plunkett III, G.; Burland, V.; Mau, B.; Glasner, tbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.;
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C;Superf
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 A82104
 RESULT
;Map position: 1;Superfamily: hypothetical protein HI1037
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K; NAWATADAYASI, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, K.; Takah. awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; Ko DNA Res. 6, 83-101, 1999
A; Title: Complete Ygenome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropyr. A; Reference number: A72450; MUID:99310339; PMID:10382966
A; Accession: A72451
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C;Genetics:
A;Gene: Z3480
 R;Heidelberg, J.F.; Eisen, J.A.; Nelson, W.C.; Clayton, R.A.; Chardson, D.; Ermolaeva, M.D.; Vamathevan, J.; Bass, S.; Qin, I. R.R.; Mekalanos, J.J.; Venter, J.C.; Fraser, C.M. Nature 406, 477-483, 2000
 A;Cross-references: GB:AE004294; GB:AE003852; NID:g9656774; A;Experimental source: serogroup O1; strain N16961; biotype
 A;Gene: APE2253
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 pathogen Vibrio cholerae
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H.; Dragoi, I.; Sellers, P
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hypothetical protein b2226 - Escherichia coli (strain K-12) C;Species: Escherichia coli (c;Species: Escherichia coli C;Date: 17-Sep-1997 #sequence_revision 17-Sep-1997 #text_ch C;Accession: H64992
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 A;Reference number: S74322; MUID:97061201; PMID:8905231
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C;Date: 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change 08-Oct-1999
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A;Note: the nucleotide sequence was submitted to the EMBL Data Library, Ma
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 R; Kaneko,
 S76446
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 EBS Lett.
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 A Res. 3, 109-136, 1996
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 Watanabe,
 E.; Nakamura,
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 Library, May 1994
protein MJ0279
 Chloroflexus aurantiacus
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 21-Jul-2000
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 DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia
A:Reference number: A99629; MUID:21156231; PMID:11258796
 A; Experimental source: C; Genetics:
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Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori,
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18-Jul-2001 #text\_change

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- Escherichia coli (strain O157:H7,

03-Aug-200:

; PID:g13360730; RIMD 0509952

GSPDB:GN00154

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A;Cross-references: GB:AE000312; GB:U00096; NID:g1788555; PIDN:AAC75286.1; A;Experimental source: strain K-12, substrain MG1655 C;Superfamily: Escherichia coli hypothetical protein b2226
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A;Tille: The complete genome sequence of E;
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A;Accession: F64844
 C; Accession: F64844
R; Blattner, F.R.; Plunkett III,
 A; Molecule type: DNA
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es 0;
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RESULT
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 RESULT 17
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 A; Title: Genome sequence of the nematode C. elegans: a platform for A; Reference number: A75000; MUID:99069613; PMID:9851916
 R;anonymous, The C. elegans Sequencing Consortium Science 282, 2012-2018, 1998
 protein F20H11.2 [imported] - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Specie: 10-May-2001 #sequence_revision 10-May-2001 #text_change 10-May-2001
 D88486
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 iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamon Nature 409, 529-533, 2001
A;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7
A;Reference number: A85480; MUID:21074935; PMID:11206551
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 WGQYW 7
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 Escherichia coli ycdS protein
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 69.0%; Score 40; DB 2; Lo
100.0%; Pred. No. 1.3e+02;
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83.3%;
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 A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A;Tille: Deciphering the biology of Mycobacterium tuberculosis from the complete A;Reference number: A70500; MUID:98295987; PMID:9634230
A;Accession: B70750
 R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; F. Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S.
 hypothetical protein Rv0090 - Mycobacterium tuberculosis (strain H37RV)
C;Species: Mycobacterium tuberculosis
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 28-Jul-2000
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 Rajandream, M.A.; Rogers, Nature 393, 537-544, 1998
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Holroyd, S.

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101 TWGTYW 106

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 R;LaRoche, J.; Henry, D.; Wyman, K.; Sukenik, A.; Falkowski, plant Mol. Biol. 25, 355-368, 1994
 A;Gene:
 S.; Smith, H.O.; Venter, J.C.; Fraser, C.M. Science 286, 1571-1577, 1999
 R; White, O.;
 cytochrome c-type biogenesis protein, heme exporter protein C -
 A75530
 A; Molecule type: mRNA
 A; Reference number: S46301; MUID: 94325461; A; Accession: S46301
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 A; Title: Cloning
 A;Molecule type: DNA
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 ;Accession: A75530
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 198
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 2 TWGQYW 7
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M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback,
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A;Cross-references: GB:Z74410; GB:AL123456; NID:g3261600; PIDN:CAA98926.1; A;Experimental source: strain H37Rv
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A;Cross-references: EMBL:Z74278; NID:g1431387; PIDN:CAA98809.1;
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 A;Gene: Rv0090 C;Superfamily: Mycobacterium tuberculosis hypothetical protein
A;Status:
 C; Accession: A84432
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 R;Guan, K.; Deschenes, R.J.; Qiu, H.; Dixon, J.E.
J. Biol. Chem. 266, 12964-12970, 1991
A;Title: Cloning and expression of a yeast protein tyrosine phosphatase.
A;Reference number: A39862; MUID:91302312; PMID:1649172
 N; Alternate names: protein D0815;
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;258/Binding site: substrate phosphate (Arg) #status predicted
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A; Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J. Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H. A; Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W. A; Title: Sequence and analysis of chromosome 1 of the plant Arab A; Reference number: A86141; MUID:21016719; PMID:11130712
 R;Lin, X.; Kaul, S.; Rounsley, S
M.; Koo, H.; Moffat, K.S.; Croni
euss, D.; Nierman, W.C.; White,
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 histidine transport protein (PTR2-B) [imported] - Arabidopsis thaliana (;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb-2001 C;Accession: C84432
 Chin, C.W.; Chung, M.K.; Conn, I ansen, N.F.; Hughes, B.; Huizar, Nature 408, 816-820, 2000
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C;Accession:
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|           | dat               | ., Tsui L., |          | H                       | , Aruffo A.,                         | 5-53.           | 10cus.";   | ະຮ          |                                                      |                | melanocyte lin  | E.        | -9232(1991).          | Ancento          | maps near t  | , Francke U. | Copeland                                              |        | ini; Hominida                        | a; Vertebrat                       | ecific secre     | E20 antigen)      | 01-NOV-1997 (Rel. 35, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) | ٠.<br>٠          | 661 AA.                           | ENTS       | aac                        |                            | Þ           | • to        | I Z H              |             |
|           | abases.           | Lee Z.H.,   |          | oma-associat            | Hellstroem                           |                 |            | el 17), the |                                                      |                | lineage-specifi | 3         |                       | по потба         | silver       | , Kobayashi  | N.G.                                                  |        | ae; Homo.                            | ••                                 | ted glycopro     | ) (ME20M/ME20S)   |                                                                                           |                  |                                   |            | Q9pu97<br>Q9pta1           | - 60 7                     | w           | 1 W F       | Q46861<br>Q14920   | P43862      |
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Submitted (NOV-1990) to the EMBL/GenBank/DDBJ databases.

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 SUBCELLULAR LOCATION: TYPE IS ALSO A SECRETED SOLUBLE
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 TISSUE SPECIFICITY: PREFERENTIALLY EXPRESSION WAS FOUND IN DYSPLASTIC TISSUES NOR IN CARCINOMAS.
 SWISS-PROT entry is copyright. It is produced through a collal
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Nucleic Acids Res. 23:154-158(1995).
-!- FUNCTION: COULD BE A MELANGENIC ENZYME.
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01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
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 -i- SUBCELLULAR LOCATION: Type I membrane protein (Potential).
-i- TISSUB SPECIFICITY: PREFERENTIALLY EXPRESSED IN MELANOCYTES.
-i- DISEASE: DEPECTS IN SILV ARE THE CAUSE OF THE SILVER COAT COLOR WHICH SEEMS TO BE DUE TO PREMATURE DEATH OF PIGMENT CELLS DURING THE HAIR CYCLE.
-i- SIMILARITY: BELONGS TO THE PMEL-17/NMB FAMILY.
 EMBL; U14133; AAA69538.1;
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 Kwon B.S., Halaban R., E
Bennett D., Pickard R.T.
 STRAIN=C57BL/6; TISSUE=Skin;
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
 Mus musculus (Mouse)
 Q60696;
 CARBOHYD
 REPEAT
 DOMAIN
 DOMAIN
 SIGNAL
 Disease
 PROSITE;
 SMART;
 Pfam; PF00801; PKD; 1
 -!- SIMILARITY: Contains 1
 "Mouse silver mutation is caused by
 MEDLINE=95175358; PubMed=7870580;
 SEQUENCE FROM N.A.
 NCBI_TaxID=10090;
 ransmembrane; Glycoprotein;
 interPro; IPR000601;
 MOUSE
 154 KTWGQYWQV 162
 SM00089; PKD;
 1 KTWGQYWAV 9
 mutation
 Similarity
8; Conserv
 PS50093;
 Conservative
 S53871.
 STANDARD;
 PKG;
۲
 91.4%;
 PKD_domain.
 Ponnazhagan S.,
 PKD domain.
 Score 53;
Pred. No.
 N-LINKED (GLCNAC. .
 CYTOPLASMIC (POTENTIAL).
 MELANOCYTE PROTEIN PMEL EXTRACELLULAR (POTENTIAL
 Signal; Melanin biosynthesis; Repeat;
 X 13
 Mismatches
 AA APPROXIMATE TANDEM REPEATS.
 a single base insertion in 17.";
 n update)
(Silver locus protein)
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 Kim K.,
 DB 1
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Q98917;
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VARIANT
 "Expression of gene coding for a melanosomal matrix protein transcriptionally regulated in the transdifferentiation of chick embryo pigmented epithellal cells.";

Cell Differ. 24:67-74(1988).
 CHICK
 entities requires a license agreement (So or send an email to license@isb-sib.ch)..
 STRAIN=White leghorn;
MEDLINE=88311098; Pub
 MEDLINE=92020667;
 STRAIN-White leghorn;
 SEQUENCE FROM N.A.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 Gallus gallus (Chicken)
 modified
 the
 -
 CHARACTERIZATION
 "Complete
 Mochii M., Agata K.,
 NCBI_TaxID=9031;
 115
 15-JUL-1998
16-OCT-2001
 SEQUENCE
 VARIANT
 L15-kDa
 .5-JUL-1998
 s SWISS-PROT entry is copyright. It is produced through a collaboratic ween the Swiss Institute of Bioinformatics and the EMBL outstation. Buropean Bioinformatics Institute. There are no restrictions on it by non-profit institutions as long as its content is in no waitied and this statement is not removed. Usage by and for commerciations as the content is the commercial content is not removed.
 DEVELOPMENTAL STAGE: PIGMENTED EPITHELIAL PTM: GLYCOSYLATED.
 FUNCTION: MIGHT BE REQUIRED FOR POLYMERIZATION OF MELANIN ONTO THE CORE STRUCTURE OF MELANOSOMES WITH ENZYMIC FUNCTION OF TYROSINASE. SUBCELLULAR LOCATION: ON THE FIBROUS MATRIX STRUCTURE OF THE
 kDa melanosomal
 SIMILARITY: BELONGS 1
SIMILARITY: Contains
 TISSUE SPECIFICITY: SPECIFIC TO PIGMENTED EPITHELIAL CELLS MELANOCYTES. NOT EXPRESSED IN LENS, NEURAL RETINA, BRAIN, 1
 PREMELANOSOME
 GIZZARD OR LIVER.
 CHICK
 154
D88348; BAA13589.1;
 ب
 te sequence and expression of a melanosomal matrix protein."; Cell Res. 4:41-47(1991).
 Similarity
 KTWGKYWQV 162
 KTWGQYWAV
 (Rel. 36, Create
(Rel. 36, Last of
(Rel. 40, Last of
 626
 106
111
535
170
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373
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 STANDARD;
 BELONGS TO THE
Contains 1 PKD
 orn; TISSUE=Retinal pigment epithelium PubMed=3409326;
 PubMed=1924173;
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 matrix protein
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 Eguchi
 84.5%;
77.8%;
 TISSUE=Retinal
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 Score 49; DB
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1; Mismatches
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R -> G (I
D -> N (I
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 S -> L (IN SILVER).
R -> G (IN SILVER).
D -> N (IN SILVER).
F -> S (IN SILVER).
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Kunst F., Ogasawara N., Moszer I., Albertini A.M., Alloni G., Azevedo V., Bertero M.G., Bessieres P., Boltin A., Borchert S., Borriss R., Boursier L., Brans A., Braun M., Brignell S.C., Bron S., Brouillet S., Bruschi C.V., Caldwell B., Capuano V., Carter N.M., Choi S.K., Codani J.J., Connerton I.F., Cummings N.J., Daniel R.A., Denizot F., Devine K.M., Dusterhoft A., Ehrlich S.D., Emmerson P.T., Entian K.D., Errington J., Fabret C., Ferrari E., Foulger D., Fritz C., Fujita M., Fujita Y., Fuma S., Galizzi A., Galleron N., Ghims S.Y., Glaser P., Goffeau A., Golightly E.J., Grandi G., Guiseppi G., Guy B.J., Haga K., Haiech J., Harwood C.R., Henaut A.,
 CARBOHYD
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 Spore cortex-lytic
 MEDLINE=98044033; PubMed=9384377;
 SEQUENCE FROM N.A.
 Microbiology
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 Serror P.;
 Sorokin
 STRAIN=168 / Marburg;
MEDLINE=96349105; PubMed=8760912;
 SEQUENCE FROM N.A.
 germination.";
 subtilis and response
 Moriyama R.,
 MEDLINE=96427343; PubMed=8830707;
 STRAIN=168;
 SEQUENCE FROM N.A.
 Bacteria;
 Bacillus subtilis
 01-OCT-1996
28-FEB-2003
 01-OCT-1996
 9507<u>3</u>9;
 SLEB
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 PROSITE;
 Pfam; PF00801; PKD;
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 NCBI_TaxID=1423;
 InterPro; IPR000601;
 riyama R., Hattori A., Miyata
gene (sleB) encoding a spore
btilis and response of the enz
 Bacteriol.
 BACSU
 161 TWGRYWQV 168
 N
 SM00089; PKD;
 A.V., Azevedo
 6
 Similarity
 Glycoprotein;
 PS50093;
 TWGQYWAV
 analysis of the Bacillus subtilis chromosome region between and kdg loci cloned in a yeast artificial chromosome."; ogy 142:2005-2016(1996).
 Firmicutes;
 223
441
4465
489
509
111
115
346
659
762
 (Rel. 34, Created)
(Rel. 34, Last sequence unique (Rel. 41, Last annotation)
 Conservative
 178:6059-6063 (1996)
 A
A
 STANDARD;
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532
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464
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 PKD;
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 enzyme precursor
 PKD_domain
 75.9%;
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 Repeat
 Bacillales; Bacillaceae;
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 Zumstein E.,
 N-LINKED
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 enzyme
 Score 44; I
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115 KDA MELANOSOMAL MATRIX PROTEIN
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 Ehrlich S.D.,
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RA Hilbert H., Holsappel S., Hosono S., Hullo M.F., Itaya M., Jones L.,
RA Joris B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C.,
RA Kobayashi Y., Koelter P., Koningstein G., Krogh S., Kumano M.,
RA Kobayashi Y., Koelter P., Koningstein G., Krogh S., Kumano M.,
RA Kurita K., Lapidus A., Lardinois S., Lauber J., Lazarevic V.,
RA Lee S.M., Levine A., Liu H., Masuda S., Mauel C., Medigue C.,
RA Lee S.M., Mellado R.P., Mizuno M., Moestl D., Nakai S., Noback M.,
RA Medina N., Mellado R.P., Mizuno M., Moestl D., Nakai S., Noback M.,
RA Parro V., Pohl T.M., Portetelle D., Porwollik S., Prescott A.M.,
RA Parro V., Pohl T.M., Portetelle D., Porwollik S., Prescott A.M.,
RA Presecan E., Pulic P., Purnelle B., Rapoport G., Rey M., Reynolds S.,
RA Rieger M., Rivolta C., Rocha E., Roche B., Rose M., Sadaie Y.,
RA Sato T., Scanlan E., Schleich S., Schroeter R., Scoffone F.,
RA Skiquchi J., Sekowska A., Seror S.J., Serror P., Shin B.S., Soldo B.,
RA Sorokin A., Tanakoshi A., Tanaka T., Terpstra P., Tognoni A.,
RA Takeuchi M., Tanakoshi A., Tanaka T., Terpstra P., Tognoni A.,
RA Tosato V., Uchiyama S., Vandenbol M., Vannier F., Vassarotti A.,
RA Viari A., Wambutt R., Wedler H., Wedler H., Weitzenegger T.,
RA Viari A., Wambutt R., Yamanoto H., Yamane K., Yata K.,
Voshida K., Yoshikawa H.F., Zumstein E., Yoshikawa H., Danchin A.,
RT "The complete genome sequence of the Gram-positive bacterium Bacillus
 PIR; Coyros, Corresponding Substitist; BG11439; sleB.
Subtitist; BG11439; sleB.
InterPro; IPR002477; PG binding.
Pfam; PF01471; PG binding 1; 1.
Pfam; PF01471; PG binding Germination; Cell wall;
 Complete
SIGNAL
 EMBL; D79978; BAA11473.1; --
EMBL; L47648; AAC83957.1; --
EMBL; C49115; CAB14209.1; --
EMBL; Z99116; CAB14225.1; --
EMBL; C69708; C69708.
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 Microbiology 146:57-64(2000).

-I- FUNCTION: Could be a lytic transglycosylase. Required for spore cortex hydrolysis during germination. Interacts strongly but noncovalently with spore components.
-I- SUBCELLULAR LOCATION: Expressed in the forespore. SleB is then
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 MEDLINE=20121739, PubMed=10588652;
Boland F.M., Atrih A., Chirakkal H., Fost
"Complete spore-cortex hydrolysis during
subtilis 168 requires SleB and YpeB.";
 "Expression of a germination-specific amidase, SleB, of Bacilli forespore compartment of sporulating cells and its localization the exterior side of the cortex in dormant spores.";
 "The complete subtilis.";
 :
 CHARACTERIZATION.
 STRAIN=168
 CHARACTERIZATION.
 Nature
 Yasuda Y
 Moriyama
 MEDLINE=99214084; PubMed=10197998;
 Bacteriol. 181:2373-2378(1999).
 INDUCTION: Expression is sigma G-dependent.
MISCELLANEOUS: B. subtilis sleB could not be
B.cereus sleB antiserum and vice versa.
SIMILARITY: BELONGS TO THE SLEB FAMILY.
 DEVELOPMENTAL STAGE: Expressed during during germination. Exists as mature l
 transported across the inner forespore membrane the outside of the cortex.

DEVELOPMENTAL STAGE: Expressed during sporulation
 390:249-256(1997).
 proteome.
 R., Fukuoka H., Miyata S., Kudoh S., Hattori A., Tochikubo K., Makino S.;
 spore.
29
305
SPORE CORTEX-LYTIC ENZYME
 POTENTIAL
 Foster S.J., Moir A. ring germination of B
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NRFI protein.
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 CCSA_CHLVU
P56315;
 Wakasugi T., Nagai T., Kapoor M., Sugita M., Ito M., Ito S., Tsudzuki J., Nakashima K., Tsudzuki T., Suzuki Y., Hamada A., Oh Inamura A., Yoshinaga K., Sugiura M.; "Complete nucleotide sequence of the chloroplast genome from the green alga Chlorella vulgaris: the existence of genes possibly
 Eukaryota; Viridiplantae; Chlorellaceae; Chlorella. NCB TaxID=3077;
 15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
15-JUL-1998 (Rel. 36, Dast annotation update)
 CHLVU
 SEQUENCE
 Pfam; PF01578; CytC_asm; 1.
Cytochrome c-type biogenesis; Chloroplast.
Cytochrome 315 AA; 35471 MW; 5020388E94FE4F10 CRC64;
 NOLSU
 EMBL; AB001684; BAA57962.1; -. PIR; T07314; T07314.
 or send
 involved in chloroplast division.";
Proc. Natl. Acad. Sci. U.S.A. 94:5967-5972(1997).
-i- FUNCTION: REQUIRED DURING CYTOCHROME BIOGENESIS
 STRAIN=IAM C-27 / Tamiya;
MEDLINE=97303241; PubMed=9159184;
 SEQUENCE FROM N.A.
 Chloroplast
 Chlorella vulgaris
 InterPro;
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 6
 Similarity
 MGOYWAV
 WGTYWAV 73
 IPR002541; CytC_asm.
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 34001 MW;
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 Chlorophyta; Trebouxiophyceae; Chlorellales;
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 Score 42; DB 1;
Pred. No. 8.1;
 Score 42; I
Pred. No. 7.
 9DF1305975F5BE16 CRC64;
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 Simon J.,
Klimmek O.
 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosiceurosids II; Brassicales; Brassicaceae; Arabidopsis.
 TRANSMEM TRANSMEM
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 30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation updat
Cytochrome c biogenesis protein ccsA.
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 quinone pool and the cytochrome c succinogenes."; Mol. Microbiol. 35:686-696(2000).
 Wolinella succinogenes.
Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales;
Helicobacteraceae; Wolinella.
MEDLINE=20039611; PubMed=10574454;
 SEQUENCE FROM N.A.
STRAIN=cv. Columbia;
 Chloroplast
 Arabidopsis thaliana (Mouse-ear cress).
 SEQUENCE
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 Cytochrome c-type
 InterPro; IPR002541; CytC_asm.
Pfam; PF01578; CytC_asm; 1.
 EMBL; AJ245540; CAB53161.1;
 the
 between
 "A NapC/NirT-type
 MEDLINE=20138370;
 SEQUENCE FROM N.A
 NCBI_TaxID=844;
 NCBI_TaxID=3702;
 GO:0016021; C:integral to membrane; NAS. GO:0017004; P:cytochrome biogenesis; NAS
 FUNCTION: May play a role in cytochrome c biogenesis and may required for maturation of the nrfa protein. SUBCELLULAR LOCATION: Integral membrane protein (Potential). SIMILARITY: IN THE C-TERMINUS, BELONGS TO THE
 European Bioinformatics Institute.
 CCMF/CYCK/CCL1/NRFE/CCSA FAMILY.
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 1 KTWGQYWA 8
 Similarity 5; Conserv
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 Gross R.,
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 PubMed=10672190; ., Einsle O., Kro
 biogenesis;
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 Score 42;
Pred. No.
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 Kroneck P.M.H.,
 (NrfH)
 Mismatches
 D2621BF042288380 CRC64;
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P76463;
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 SEQUENCE
 Hypothetical protein; SIGNAL 1
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 Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Bur
Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew
Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose I
 InterPro, IPR002541; CytC_asm.

Pfam; PF01578; CytC_asm; T.

Cytochrome c-type biogenesis; Chloroplast.

SEQUENCE 328 AA; 37732 MW; C88D1508B2924D6F CRC64;
 entities requires a license agreement (S or send an email to license@isb-sib.ch).
 the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by ar
 -i- FUNCTION: REQUIRED DURING CYTOCHROME BIOGENESIS AT THE STEP HEME ATTACHMENT (BY SIMILARITY).
-i- SIMILARITY: BELONGS TO THE CCMF/CYCK/CCL1/NRFE/CCSA FAMILY.
 Sato S., Nakamura Y., Kaneko T., Asamizu E., Tabata S.; "Complete structure of the chloroplast genome of Arabidopsis thaliana.";
 STRAIN=K12 / MG1655;
MEDLINE=97426617; PubMed=9278503;
 Bacteria; Proteobacteria;
Enterobacteriaceae; Eschei
 Escherichia coli
 Hypothetical
 EMBL; AP000423; BAA84436.1;
 This SWISS-PROT entry is copyright. It is produ between the Swiss Institute of Bioinformatics
 CHAIN
 EcoGene;
 PIR; H64992; H64992
 Science
 Mau B.,
 YFAQ OR B2226
 16-OCT-2001
 DNA Res. 6:283-290(1999).
 SEQUENCE FROM N.A
 NCBI_TaxID=562;
 ğ
 complete
 255
 AE000312; AAC75286.1;
 Similarity
5; Conserv
 nplete genome sequence of 277:1453-1474(1997).
 Shao Y.;
 EG14079; yfaQ.
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l protein
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71.4%;
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 Gammaproteobacteria; Enterobacteriales;
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 Score 41; DB
Pred. No. 12;
 HYPOTHETICAL PROTEIN YFAQ
 Complete proteome POTENTIAL.
 PRT;
 72C26716D953C9D1
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 Escherichia coli K-12.";
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 RESULT
 Matches
 STRAIN=0157:H7 / RIMD 0509952;

MEDLINE=21156231; PubMed=11258796;

Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Y.
Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., T.
Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Ya.
Kuhara S., Shiba T., Hattori M., Shinagawa H.;
Kuhara S., Shiba T., Hattori M., Shinagawa H.;
Complete genome sequence of enterohemorrhagic Escherichia oli7:H7 and genomic comparison with a laboratory strain K-1
DNA Res. 8:11-22(2001).
 MEDLINE=97061202; PubMed=8905232;
Oshima T., Aiba H., Baba T., Fujita K., Hayashi K., Honjo A.,
Oshima T., Aiba H., Baba T., Fujita K., Kashimoto K.,
Inada T., Itoh T., Kajihara M., Kanai K., Kashimoto K.,
Kimura S., Kitagawa M., Makino K., Masuda S., Miki T., Mizobuchi K.,
Mori H., Motomura K., Nakamura Y., Nashimoto H., Nishio Y., Saito N.,
Sampei G., Seki Y., Tagami H., Takemoto K., Wada C., Yamamoto Y.,
 SEQUENCE FROM N.A.
 Perna N.T., Plunkett G. III, Burland V., Mau B., Glasner J.D., Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A., Posfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller L., Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K., Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C., Welch R.A., Blattner F.R.,
 MEDLINE=21074935; PubMed=11206551;
 MEDLINE=97426617, PubMed=9278503;
Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T.,
Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Ma-
Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Ro
 SEQUENCE FROM N.A.
STRAIN=K12 / MG1655;
 Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriaceae; Escherichia.
 Escherichia coli, and Escherichia coli 0157:H7.
 Hypothetical protein ycdS precursor. YCDS OR B1024 OR Z1526 OR ECS1270.
 01-NOV-1997
01-NOV-1997
 ECOLI
 between
 This
 Nature
 STRAIN=0157:H7
 SEQUENCE
 SEQUENCE FROM N.A.
 NCBI_TaxID=562,
 YCDS
 16-OCT-2001
 "Genome sequence of enterohaemorrhagic Escherichia coli 0157:H7.";
 "A 718-kb
 "The
 2
 SIMILARITY: STRONG,
 B., Shao Y.;
 SUBCELLULAR LOCATION: Outer membrane (Potential)
 SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
 3
 complete genome sequence
1Ce 277:1453-1474(1997).
 ECOLI
 125
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 409:529-533(2001).
 ت.
د.
 FROM N.A.
 b DNA sequence of the Escherichia coli K-12 genome
nding to the 12.7-28.0 min region on the linkage map.";
3:137-155(1996).
 Horiuchi T.;
 WGQYW 129
 MGQYW
 (Rel. 35, Created)
(Rel. 35, Last seq
(Rel. 40, Last ann
 Conservative
 Bioinformatics Institute.
 STANDARD;
 83334;
 EDL933 / ATCC 700927;
 Last sequence update)
Last annotation update)
 占
 Y. PESTIS HEMIN-BINDING PROTEIN HMSH
 ç,
 of Escherichia coli K-12.";
 PRT;
 Mismatches
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 Goeden M.A., Rose I
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 Enterobacteriales;
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 Indels
 Rose D.J.,
 restrictions
 hia coli
K-12.";
 Burland V.,
 Yasunaga
 Tobe T.,
 Yokoyama K.,
 G.F.,
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 Gaps
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RESULT 10
FCP_ISOGA
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 Matches
 Query Match
Best Local
 FCP_ISOGA
Q39709;
 EMBL; 64844.

PIR; F64844; F64844.

PIR; F90787; F90787.

EcoGene; EG13865; ycds.
 CHAIN
SEQUENCE
 01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Fucoxanthin-chlorophyll A-C binding protein,
 SIGNAL
 EMBL; AE000204; AAC74109.1; -.
EMBL; D90739; BAA35806.1; -.
EMBL; D90740; BAA35809.1; -.
EMBL; AE005302; AAG55642.1; -.
EMBL; AP002554; BAB34693.1; -.
 Laroche J., Henry D., Wyman K., Sukenik A., Falkowski P.;
Laroche J., Henry D., Wyman K., Sukenik A., Falkowski P.;
"Cloning and nucleotide sequence of a cDNA encoding a major
fucoxanthin-chlorophyll a/c-containing protein from the chry
Isochrysis galbana: implications for evolution of the cab ge
 InterPro; IPR001440; T
Pfam; PF00515; TPR; 1.
 use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
 Plant Mol.
 MEDLINE=94325461; PubMed=8049362;
 STRAIN=DUN;
 SEQUENCE FROM N.A.,
 Eukaryota;
 Hypothetical protein;
 family
 NCBI_TaxID=37099;
 Isochrysis galbana
 (FCP).
 SUBCELLULAR LOCATION: CHLOROPLAST THYLAKOID MEMBRANE. FCPS ARE PROBABLY TRANSPORTED ACROSS THE ENDOPLASMIC RETICULUM MEMBRANES THAT SURROUND THE PLASTID VIA A SIGNAL PEPTIDE, FOOLLOWED BY TRANSLOCATION ACROSS THE THYLAKOID MEMBRANE VIA A TRANSIT BEPTINDUCTION: EXPRESSION IS INCREASED 5-FOLD UNDER CONDITIONS OF
 FUNCTION: THE LIGHT-HARVESTING COMPLEX (LHC) FUNCTIONS AS A LIGHT RECEPTOR, IT CAPTURES & DELIVERS EXCITATION ENERGY TO PHOTOSYSTEMS WITH WHICH IT IS CLOSELY ASSOCIATED. ENERGY IS TRANSFERED FROM THE CAROTENOID AND CHL C (OR B) TO CHL A AND THE PHOTOSYNTHETIC REACTION CENTERS WHERE IT IS USED TO SYNTHESIZE ATP AND REDUCING
 SUBUNIT: THE LHC COMPLEX OF CHROMOPHYTIC ALGAE IS COMPOSEI FUCOXANTHIN, CHLOROPHYLL A AND C BOUND NON-COVALENTLY BY FUCOXANTHIN CHLOROPHYLL PROTEINS (FCPS). THE RATIO OF THE PIGMENTS IN LHC; FUCOXANTHIN: CHLOROPHYLL C: CHLOROPHYLL I
 LOW LIGHT .
SIMILARITY:
 PIGMENTS
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 314 WGQYW 318
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 Similarity
 MGOYW
 Haptophyceae;
 27
807 AA;
 Biol.
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 STANDARD;
 BELONGS
 25:355-368 (1994)
 26
807
92207
 AND PARTIAL SEQUENCE
 69.0%;
 Outer membrane;
 ö
 Isochrysidales; Isochrysis
 WW;
 THE FCP FAMILY
 <u>,</u>
 Score 40;
Pred. No.
 POTENTIAL.
HYPOTHETICAL PROTEIN YCDS
B20067C3D41723FD CRC64;
 PRT;
 Mismatches
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 Signal; Complete
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 MEDLINE=98295987; PubMed=9634230; Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harr: Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harr: Gordon S.V., Eiglmeier K., Gas S., Barry C.E. III, Tekaia F., Badcock K., Basham D., Brown D., Chillingworth T., Connor R., Bavies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holroyd Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., Oliver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J., Rutter S., Seeger K., Skelton S., Squares S., Squares R., Sulston J.E., Taylor K., Whitehead S., Barrell B.G.; "Deciphering the biology of Mycobacterium tuberculosis from the complete genome sequence.", Nature 393:537-544(1998).
 Q10887;
01-OCT-1996
 between
the Euro
 01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequ
28-FEB-2003 (Rel. 41, Last anno
Hypothetical protein Rv0090
RV0090 OR MT0099 OR MTCY251.08.
 MYCTU
 between
 Submitted
 Fleischmann R.D., Alland D., Eisen J.A., Carpenter L., White O., Peterson J., DeBoy R., Dodson R., Gwinn M.L., Haft D., Hickey E., Rotonay J.F., Nelson W.C., Umayam L.A., Ermolaeva M.D., Salzberg Delcher A., Utterback T., Weidman J., Khouri H., Gill J., Mikula
 STRAIN=CDC 1551 / Oshkosh;
Fleischmann R.D., Alland D
 SEQUENCE FROM N.A.
 SEQUENCE
 NCBI_TaxID=1773;
 Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium.
 Mycobacterium tuberculosis
 MYCTU MYCTU
 SEQUENCE
 TRANSMEM
 Pfam; Pf00504; chloroa b-bind; 1.
ProDom; PD000275; Chloro_ABbind; 1.
Light-harvesting polypeptide; Chloroplast; Photosynthesis;
Photosystem_II; Multigene family; Chlorophyll; Transmembrane;
 EMBL;
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 SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
 S46301;
 198
 X77333; CAA54547.1; -.
 genome comparison
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 Similarity 5; Conserv
 id; Transit peptide.
 an email to license@isb-sib.ch).
 the Swiss Institute of Bioinformatics and the EMBL outstation -
pean Bioinformatics Institute. There are no restrictions on its
non-profit institutions as long as its content is in no way
and this statement is not removed. Usage by and for commercial
requires a license agreement (See http://www.isb-sib.ch/announce/
 TWGTYW
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 TWGQYW 7
 01; S46301.
IPR001344; Chloro_ABbind.
 (APR-2001) to the EMBL/GenBank/DDBJ databases.
 208
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 102
 Conservative
 AA,
 STANDARD;
 203
 118
 208
 67.2%;
83.3%;
 22471
 Last annotation update)
 Last sequence update)
 0f
 MW;
 Mycobacterium tuberculosis
 0
 Score 39;
Pred. No.
 Pred. No. 16;
); Mismatches
 POTENTIAL.
 CHLOROPLAST
 PROTEIN
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RESULT 12
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 28-FEB-2003 (Rel. 4)
28-FEB-2003 (Rel. 4)
15-SEP-2003 (Rel. 4)
Spore cortex-lytic 6
 Moriyama R.
Yasuda Y.,
 "A germination-specific spore cortex-lytic en spores: cloning and sequencing of the gene an characterization of the enzyme.";
J. Bacteriol. 178.5320
 "A spore-lytic enzyme germination.";
 MEDLINE=94362906; PubMed=8081503; Makino S., Ito N., Inoue T., Miya "A spore-lytic enzyme released fr
 Grechkin Y., Pusch G., Haselk
Overbeek R., Kyrpides N.;
"Genome sequence of Bacillus
Bacillus anthracis.";
 BACCR
 SEQUENCE FROM N.A., SECUTION OF CYS-258.
STRAIN=IFO 13597;
 Lydnova M., Goldsman E., Larsen N., D'Souza M., Lapid
Chu L., Mazur M., Goldsman E., Larsen N., D'Souza M., Walunas
Chu L., Mazur M., Goldsman E., Larsen N., D'Souza M., Walunas
 SLEB
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 MEDLINE=99214084;
 Microbiology
 MEDLINE=22608415; PubMed=12721630
Ivanova N., Sorokin A., Anderson
 Hypothetical TRANSMEM 1
 EMBL; Z74410; CAA98926.1; -. EMBL; AE006921; AAK44321.1;
 CHARACTERIZATION.
 STRAIN=IFO 13597;
 SEQUENCE OF 33-51.
 MEDLINE=96359394; PubMed=8752358; Moriyama R., Kudoh S., Miyata S.,
 Nature
 SEQUENCE FROM N.A
 Bacteria; Firmicutes;
 Bacillus cereus
Bacillus cereus.
 SLEB OR BC2753
 SEQUENCE
 TRANSMEM
 TubercuList;
 TIGR; MT0099;
 PIR; B70750;
 (SCLE)
 Local
 BACCR
 177
 Similarity 6; Conserv
 R., Fukuoka
., Tochikubo
 KRWGEYFAV
 KTWGQYWAV
 14579
 Conservative
 B70750
 140:1403-1410(1994)
 STANDARD;
; PubMed=10197998;
woka H., Miyata S.,
kubo K., Makino S.;
 (strain ATCC 14579 / DSM 31),
 PubMed=12721630;
 / DSM 31;
 41, Created)
41, Last sequence up
42, Last annotation
 185
 ø
 1396;
 enzyme
 SEQUENCE
 67.2%;
66.7%;
 Bacillales; Bacillaceae; Bacillus
 precursor
 Score 39; DB
Pred. No. 19;
2; Mismatches
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 Miyata
 OF 33-52;
 cereus
 POTENTIAL
 POTENTIAL.
 PRT;
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 01033C21199DEC51 CRC64
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 and
 S., Moriyama R.
Bacillus cereus
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(Germination-specific amidase)
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19;
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 64-80;
 comparative analysis with
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 ., Hattori A., Makino enzyme from Bacillus and molecular
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 RESULT 13
 Query Match
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 MUTAGEN
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SEQUENCE
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 STRAINHIESSI / PubMed=12235376;
MEDLINE=22220767; PubMed=12235376;
Takami H., Takaki Y., Uchiyama I.;
"Genome sequence of Oceanobacillus iheyensis isolated from "Genome sequence of Adaptive capabilities to extreme
 SEQUENCE FROM N.A. STRAIN=HTE831 / DSM 14371 / JCM 11309;
 SLEB OR OB1806.
Oceanobacillus iheyensis.
 Spore cortex-
 P59105;
28-FEB-2003
 OCEIH
 EMBL; D63645; BAA09800.1; -
InterPro; IPR002477; PG_binding.
Pfam; PF01471; PG_binding_1; 1.
 use by non-profit institutions as long as its a modified and this statement is not removed. Usage entities requires a license agreement (See http://w
 This
 :
 "Expression of a germination-specific amidase, SleB, of Bacilli in forespore compartment of sporulating cells and its localization on the exterior side of the cortex in dormant spores.", J. Bacteriol. 181:2373-2378(1999).
 environments."
 Bacteria; Firmicutes; Bacillales;
 28-FEB-2003
 SIGNAL
 EMBL; AE017007; AAP09706.1; -.
 or send an email to license@isb-sib.ch).
 the European Bioinformatics Institute.
 between
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 28-FEB-2003
 Hydrolase; Sporulation; SIGNAL 1 32 CHAIN 33 259 MUTAGEN 258 258
 transported across the inner forespore membrane an the outside of the cortex.

DEVELOPMENTAL STAGE: Expressed during sporulation during germination. Exists as mature but inaction dormant energy.
 spore cortex hydrolysis during germination. May form a complex with some hydrophobic spore component, leading to a stabilization of the enzyme in a spore-bound form.

ENZYMB REGULATION: Inhibited by HgCl(2). Activity is recovered by
 the addition of 2-mercaptoethanol. SUBCELLULAR LOCATION: Expressed in the
 SIMILARITY: BELONGS
 SIMILARITY: BELONGS TO THE SLEB FAMILY.
 MISCELLANEOUS: B.cereus sleB could B.subtilis sleB antiserum and vice
 INDUCTION:
 OCEIH
 SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation -
 (By similarity)
 TaxID=182710;
 70
 Similarity 71. 5; Conservative
 WGTYWAL 76
 WGQYWAV 9
 46
259 1
 (Rel. 41, Created)
(Rel. 41, Last seq
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 spore.
 Res. 30:3927-3935(2002)
 A,
 Expression is sigma G-dependent.
PMR: B.cereus sleB could not be c
 STANDARD;
 enzyme
 28257
 67.2%;
71.4%;
 Last sequence update)
Last annotation updat
 for
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 Germination; Cell wall; Signal
 MW;
 precursor
 THE SLEB FAMILY.
 spore cortex
 Score 39; DB
Pred. No. 20;
1; Mismatches
 SPORE CORTEX-LYTIC ENZYME.
C->G: STRONG DECREASE IN ACTIVITY.
D -> K (IN REF. 3).
 PRT;
 -> K (IN REF. 3).
36F266D32EDA544E CRC64;
 Bacillaceae;
 on update) (SCLE).
 276
 (See http://www.isb-sib.ch/announce/
 versa.
 There are no restrictions ong as its content is in
 hydrolysis
 DB 1;
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 Oceanobacillus
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RESULT 14
NPS2_MOUSE
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 055126;
16-OCT-2001 (Rel. 4
16-OCT-2001 (Rel. 4
28-FEB-2003 (Rel. 4
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 use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
 Seroussi E., Pan H.Q., Kedra D., Roe B.A., Dumanski "Characterization of the human NIPSNAP1 gene from 21 novel gene family.";
Gene 212:13-20(1998).
-i- SIMILARITY: BELONGS TO THE NIPSNAP FAMILY.
 NipSnap2 protein (Glioblastoma amplified sequence) GBAS OR NIPSNAP2.
 NPS2
 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no resti
 SEQUENCE
 EMBL; AJ001261; CAA04635.1; -. MGD; MGI:1278343; Gbas.
 SEQUENCE FROM N.A. MEDLINE=98326305;
 NCBI_TaxID=10090;
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
 Mus musculus (Mouse).
 SEQUENCE
 CHAIN
 Complete proteome.
 Hydrolase; Sporulation; Germination;
 Pfam; PF01471; PG_binding_1;
 EMBL; AP004599; BAC13762.1; -.
InterPro; IPR002477; PG_binding.
 Local
 MOUSE
197
 70
 3 WGQYWA 8
 3 WGQYWAV
 Similarity 5; Conserv
 5
 Similarity
WGNYWA 202
 WGTYWAL
 26
276 AA;
 281 AA;
 Conservative
 Conservative
 STANDARD;
 76
 9
 PubMed=9661659;
 40, Created)
40, Last sequence update)
41, Last annotation updat
 25
276
30363
 32932 MW;
 67.2%;
83.3%;
 67.2%;
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 Score 39; DB Pred. No. 21; 0; Mismatches
 Score 39;
Pred. No.
 SPORE CORTEX-LYTIC
 PRT;
 DB1DA640BBEE3CF6
 260D52675BF1CA7E CRC64;
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RESULT 15 NPS2\_HUMAN ID NPS2\_HUMAN

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Richards Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

A Raha S.S., Loquellano N.A., Peters G.J., Malek J.A., Gunaratne P.H.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Hiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

A Hutterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Veneration and Initial analysis of more than 15,000 full-length
 Query Match
Best Local
 Matches
 MIM;
 Genew;
 EMBL; AJ001259; CAA04633.1;
EMBL; BC001837; AAH01837.1;
EMBL; BC000732; AAH00732.1;
 EMBL; AF029786; AAC29002.1; -.
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the European Bioinformatics Institute
 This
 human and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 MEDLINE=22388257; PubMed=12477932;
 MEDLINE=98326305; PubMed-
Seroussi E., Pan H.-Q., F
"Characterization of the
novel gene family.";
 SEQUENCE FROM N.A.
 WEDLINE-98277458; PubMed=9615231; Wang X.-Y., Smith D.T., Liu W., James C.D.; Wang X.-Y., Smith D.T., Liu W., James C.D.; "GBAS, a novel gene encoding a protein with tyrosine phosphorylation sites and a transmembrane domain, is co-amplified with EGFR.";
 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
 GBAS OR NIPSNAP2.
Homo sapiens (Human)
 NipSnap2
 16-OCT-2001 (Rel. 40,
16-OCT-2001 (Rel. 40,
15-SEP-2003 (Rel. 42,
 SEQUENCE
 CONFLICT
 SEQUENCE FROM N.A.
 SEQUENCE FROM N.A.
 NCBI_TaxID=9606;
 w;; 603004; -.
 SIMILARITY: BELONGS TO THE NIPSNAP FAMILY.
 TISSUE SPECIFICITY: Widely expressed. skeletal muscle.
 SWISS-PROT
 HGNC: 4179;
 Similarity 5; Conserv
 an email to license@isb-sib.ch).
 043801;
 001 (Rel. 40, Created)
001 (Rel. 40, Last sequence update)
003 (Rel. 42, Last annotation update)
protein (Glioblastoma amplified sequence).
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 49:448-451(1998).
 286
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 entry is copyright. It is produced through a collaboration iss Institute of Bioinformatics and the EMBL outstation -
 GBAS.
 PubMed=9661659;
H.-Q., Kedra D., Roe B.
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 67.2%;
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 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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 PTP1_YEAST
P25044;
01-MAY-1992
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 01-MAY-1992 (Rel.
01-MAY-1992 (Rel.
01-NOV-1997 (Rel.
 YEAST
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 BRARE
 SEQUENCE FROM N.A.
MEDLINE=91302312; PubMed=1649172;
 Bukaryota; Fungi; Ascomycota; Saccharo
Saccharomycetales; Saccharomycetaceae;
 Protein-tyrosine phosphatase PTP1 OR YDL230W.
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 melanogaster.";
Submitted (SEP-1999) to
 Actinopterygii; Neopterygii; Cyprinidae; Danio.
 Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
 NipSnap2 protein
 Rasmussen
Submitted
 SEQUENCE FROM N.A. Rasmussen S.W.;
 J. Biol.
 Guan K.,
 Saccharomyces cerevisiae (Baker's yeast).
 ZFIN;
 EMBL; AJ249797; CAB56702.1;
 or send an email to license@isb-sib.ch).
 entities requires a license agreement
 the European Bioinformatics Institute.
 This
 NIPSNAP2
 Q9PU38;
 Cloning
 NCBI_TaxID=4932;
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 -!- SIMILARITY: BELONGS
 "Cloning of NIPSNAP gene orthologues in Danio
 Kedra D.,
 SEQUENCE
 SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
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 ZDB-GENE-991008-18;
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 Similarity 83.: 5; Conservative
 1 S.W.;
d (JUL-1996)
 Deschenes R.J., Qiu H., Dixon J.E.; and expression of a yeast protein tyrosine phosphatase."; Chem. 266:12964-12970(1991).
 WGNYWA 209
 MGOYWA
 FROM N.A
 WGNYWA 207
 WGQYWA
 Dumanski J.P.;
 288 AA;
 (Rel.
 STANDARD;
 STANDARD;
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 (Fragment).
 40, Last
40, Last
 22, Created)
22, Last sequence update)
35, Last annotation update)
phosphatase 1 (EC 3.1.3.48)
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to the EMBL/GenBank/DDBJ databases REQUIRED FOR VEGETATIVE GROWTH.
 67.2%;
83.3%;
 Created)
 the EMBL/GenBank/DDBJ TO THE NIPSNAP FAMILY.
 MW;
 nipsnap2.
 sequence up
annotation
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 Score 39;
Pred. No.
 Teleostei;
 Saccharomycotina; Saccl
cetaceae; Saccharomyces
 (Danio rerio).
 Craniata;
 PRT;
 66EDDBB045C6288C CRC64;
 Mismatches
 update)
 335
 288
 update)
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 Ostariophysi; Cypriniformes;
 DB 1; Length 288;
 Vertebrata; Euteleostomi;
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FUNCTION: IS NOT

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 RESULT 18
 Query Match
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SEQUENCE FROM N.A.
STRAIN=cv. Columbia;
MEDLINE=20083487; PubMed=10617197;
 SEQUENCE FROM N.A. STRAIN=CV. C24;
 Song W., Steiner H.-Y.,
Becker J.M.;
 Arabidopsis thaliana (Mouse-ear cress).

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosid
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
 01-NOV-1995
16-OCT-2001
 P46032;
01-NOV-1995
 ARATH
 Hydrolase.
ACT_SITE
 PRINTS; PR00700; PRTYPH
SMART; SM00194; PTPC; 1
 EMBL; M64062; AAA34923.1; -.
EMBL; Z74278; CAA98809.1; -.
PIR; A39862; A39862.
HSSP; P29350; 1GWZ.
SGD; S0002399; PTP1.
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 Frommer W.B., Hummel S., Rentsch D., "Cloning of an Arabidopsis histidine nitrate and peptide transporters.", FEBS Lett. 347:185-189(1994).
 Submitted
 STRAIN=cv.
 01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Peptide transporter PTR2-B (Histidine transporting
 SEQUENCE
 PROSITE; PS00383; TYR PHOSPHATASE 1; 1.
PROSITE; PS50056; TYR PHOSPHATASE 2; 1.
PROSITE; PS50055; TYR_PHOSPHATASE_PTP;
 GO; GO:0006470; P:protein amino acid dephosphorylation; IDA. InterPro; IPR000387; TYR phosphatase. InterPro; IPR000242; Tyr PP. Pfam; PF00102; Y phosphatase; 1.
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 MEDLINE=94307379; PubMed=8033999;
 -
 PTR2-B
 PT2B_
 SEQUENCE FROM N.A.
STRAIN=cv. Landsberg
 TYROSINE PHOSPHATASE FAMILY.
 tyrosine + phosphate.
SUBCELLULAR LOCATION: Cytoplasmic
SIMILARITY: BELONGS TO THE NON-RE
 CATALYTIC ACTIVITY: Protein tyrosine phosphate + H(2)0 = protein
 _TaxID=3702;
 ARATH
 801
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 OR NTR1 OR AT2G02040 OR F14H20.11.
 Similarity
5; Conserv
 KTWDQFW 114
 KTWGQYW 7
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335 AA;
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38868 MW;
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71.4%;
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 the EMBL/GenBank/DDBJ databases
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 Score 39;
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 PRT;
 15F71E50694BE562 CRC64;
 NON-RECEPTOR CLASS OF
 Mismatches
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 1;
 core eudicots; Rosidae;
 Length 335;
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 01-AUG-1990 (Rel. 15, C:
01-AUG-1990 (Rel. 15, L:
15-SEP-2003 (Rel. 42, L:
Sulfate transport system
CYSU OR CYST OR B2424.
 P16701;
 TRANSMEM CONFLICT
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 EMBL;
 -!- FUNCTION: PEPTIDE TRANSPORT. HIGH AFFINITY, LOW CAPACITY TRANSPORTER. CAN ALSO TRANSPORT HISTIDINE.
-!- SUBCELLULAR LOCATION: Integral membrane protein.
-!- SIMILARITY: BELONGS TO THE PTR2 FAMILY OF TRANSPORTERS.
 Lin X., Kaul S., Rounsley S.D., Shea T.P., Benito M.-I., Town C Fujii C.Y., Mason T.M., Bowman C.L., Barnstead M.E., Feldblyum Buell C.R., Ketchum K.A., Lee J.C., Ronning C.M., Koo H.L., Moffat K.S., Cronin L.A., Shen M., Pai G., Van Aken S., Umayam Tallon L.J., Gill J.E., Adams M.D., Carrera A.J., Creasy T.H., Goodman H.M., Somerville C.R., Copenhaver G.P., Preuss D., Mierman W.C., White O., Eisen J.A., Salzberg S.L., Fraser C.M.,
 Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; Escherichia.
 Escherichia coli.
 SEQUENCE
 Pfam; PF00854; PTR2; PROSITE; PS01022; PT
 PIR; C84432; C84432.
PIR; S46236; S46236.
InterPro; IPR000109;
 EMBL; L39082; AAB00858.1; -.
EMBL; X77503; CAA54634.1; -.
 entities requires a license agreement (Some send an email to license@isb-sib.ch).
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 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
 Nature 402:761-768(1999)
 thaliana.";
 NCBI_TaxID=562;
 PROSITE;
 the European Bioinformatics Institute.
 "Sequence and analysis of chromosome 2 of the plant Arabidopsis
 Venter J.C.;
 110 WGRYWTI 116
 AC006532; AAD20096.1; -.
 w
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 transport;
 Similarity
 PS01022; PTR2_1; 1.
PS01023; PTR2_2; 1.
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 PRT;
 Transmembrane.
 C58F8194776E2D97 CRC64;
 Shea T.P., Benito M.-I., Town C.D., C.L., Barnstead M.E., Feldblyum T.V.,
 Mismatches
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STRAIN=K12; SEQUENCE FROM N.A

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 Transport;
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 Yamamoto Y., Aiba H., Baba T., Hayashi K., Inada T., Isono K., Itoh T., Kimura S., Kitagawa M., Makino K., Miki T., Mitsuhashi N Mizobuchi K., Mori H., Nakade S., Nakamura Y., Nashimoto H., Oshima T., Oyama S., Salto N., Sampei G., Satch Y., Sivasundaram Tagami H., Takahashi H., Takeda J., Takemoto K., Uehara K., Wada Yamagata S., Horiuchi T.; "Construction of a contiguous 874-kb sequence of the Escherichia -KI2 genome corresponding to 50.0-68.8 min on the linkage map and painlysis of its sequence features.";
 TRANSMEM TRANSMEM
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 EMBL;
 EcoGene; EG10197; cysU.
InterPro; IPR000515; BPD transp.
InterPro; IPR000567; Sulph_transpt
Pfam; PF00528; BPD transp; 1.
TIGRPAMs; TIGR00969; 3a0106802; 1.
 use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib.
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 PIR; A35402; QRECST.
 or send an email to license@isb-sib.ch).
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 MEDLINE=97349980;
 SEQUENCE
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 Mau B.,
 MEDLINE=97426617; PubMed=9278503;
Blattner F.R., Plunkett G. III, Bloch C.,
Riley M., Collado-Vides J., Glasner J.D.
Gregor J., Davis N.W., Kirkpatrick H.A.,
 STRAIN=K12 /
 nucleotide
 Sirko A.,
 TRANSMEM
 MEDLINE=90264334;
 "Sulfate
 (Potential).
SIMILARITY: BELONGS TO :
SYSTEM PERMEASE FAMILY.
 (cysA), two transmembrane proteins (cys?) binding protein (cysP) (Probable).
SUBCELLULAR LOCATION: Integral membrane
 European Bioinformatics Institute.
 SUBUNIT:
 FUNCTION: Part of the ABC transporter complex cysAWTP 3.A.1.6.1) involved in sulfate/thiosulfate import. Proresponsible for the translocation of the substrate acr
 SUBUNIT: The complex is composed of two ATP-binding proteins (cysR), two transmembrane proteins (cysT and cysW) and a sol
 SWISS-PROT entry is copyright. It is produced through a ceen the Swiss Institute of Bioinformatics and the EMBL
 complete genome sequence
nce 277:1453-1474(1997).
 M32101; AAA23637.1; -. AE000330; AAC75477.1; -.
 D90871; BAA16298.1; -. D90872; BAA16307.1; -.
 Shao
 Similarity
 proteome.
 4:91-113 (1997)
 , Hrynlewicz M.M., Hulanicka D.M., Boeck A.; and thiosulfate transport in Escherichia coli K-12: de sequence and expression of the cysTWAM gene cluster."; riol. 172:3351-3357(1990).
 PS00402;
 FROM N.A.
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 Sulfate
 99
136
185
215
243
277
 MG1655;
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 PubMed=2188958;
 PubMed=9205837;
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 Escherichia coli K-12.";
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STRAIN-06:H1 (CFT073 / ATCC 700928;
STRAIN-06:H1 (CFT073 / ATCC 700928;
MEDLINE=22388234; PubMed=12471157;
Welch R.A., Burland V., Plunkett G. III, Redford P. Rasko D., Buckles E.L., Liou S.-R., Boutin A., Hacl Mayhew G.F., Rose D.J., Zhou S., Schwartz D.C., Pe. Mobley H.L.T., Domnenberg M.S., Blattner F.R.;
Mobley H.L.T., Domnenberg M.S., Blattner F.R.;
"Extensive mosaic structure revealed by the comple of uropathogenic Escherichia coli.",
Proc. Natl. Acad. Sci. U.S.A. 99:17020-17024 (2002)
 01-AUG-1992
01-AUG-1992
28-FEB-2003
 "Cloning and sequencing
 UBIA EC
 STRAIN=K12 / MG1655;
MEDLINE=94089392; PubMed=8265357;
Blattner F.R., Burland V.D., Plunkett
 MEDLINE=92354744; PubMed=1644192;
Siebert M., Bechthold A., Melzer M.,
Schroeder J., Severin K., Heide L.;
"Ubiquinone biosynthesis. Cloning of
pyruvate-lyase and 4-hydroxybenzoate
 UBIA OR CYR OR B4040 OR C
Escherichia coli,
Escherichia coli 06, and
Escherichia coli 0157:H7.
 pyruvate-lyase and
Escherichia coli.";
 SEQUENCE FROM N.A.
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 28-FEB-2003 (Rel. 41, Last annotation update)
4-hydroxybenzoate octaprenyltransferase (EC 2
 SEQUENCE
 Nucleic
 "Analysis of the region from 89.2
 Daniels D.L.;
 Submitted (NOV-1992)
 Nishimura K., Nakahigashi K
"Location of the ubiA gene
 STRAIN=K12 /
 MEDLINE=92355505; PubMed=1644758
 Enterobacteriaceae; Escherichia.
 Bacteria; Proteobacteria;
 polyprenyltransferase)
 SEQUENCE FROM N.A.
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 MEDLINE=92380960; PubMed=1512213;
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 307:347-350(1992).
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 174:5762-5762(1992)
 174:5309-5316(1992)
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 217992, 83334;
 Escherichia coli genome.
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 Gammaproteobacteria; Enterobacteriales;
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MEDLINE=21156231; PubMed=11258796;
Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoy:
Hayashi T., Makino K., Ohnishi M., Murata T., Tanaka M., Tobe Tida T., Tanaka M., Tobe Tida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasuna:
Kuhara S., Shiba T., Hattori M., Shinagawa H.;
"Complete genome sequence of enterohemorrhagic Escherichia coli
0157:H7 and genomic comparison with a laboratory strain K-12.";
DNA Res. 8:11-22(2001).
 MEDLINE=21074935; PubMed=11206551;
Perna N.T., Plunkett G. III, Burland V., Mau B., Glasner J.D.,
Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A.,
Posfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller L.,
Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K.,
Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C.,
Welch R.A., Blattner F.R.;
"Genome sequence of enterohaemorrhagic Escherichia coli 0157:H7."
Nature 409:529-533(2001).
 EMBL;
EMBL;
EMBL;
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EMBL;
 Suzuki K., Ueda M., Yuasa M., Nakagawa T., Kawamukai M., Matsuda H.; "Evidence that Escherichia coli ubiA product is a functional homolog of yeast COQ2, and the regulation of ubiA gene expression."; Biosci. Biotechnol. Biochem. 58:1814-1819(1994).
-!- FUNCTION: SYNTHESIS OF 3-OCTAPRENYL-4-HYDROXYBENZOATE.
-!- CATALYTIC ACTIVITY: 4-hydroxybenzoate + farnesylfarnesylgeraniol
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 "Characterization of polyprenyldiphosphate:4-hydroxybenzoate polyprenyltransferase from Escherichia coli."; Biochim. Biophys. Acta 1212:93-102(1994).
 MEDLINE=94207029; F
Melzer M., Heide L.
 Wu G., Williams H.D., Gibson F., Poole R.K.;
"Mutants of Escherichia coli affected in respiration: the cloning
nucleotide sequence of ubiA, encoding the membrane-bound p-
hydroxybenzoate:octaprenyltransferase.";
 SEQUENCE OF
STRAIN=K12
 [9]
 SEQUENCE FROM N.A.
STRAIN=0157:H7 / RIMD 0509952;
 SEQUENCE FROM N.A. STRAIN=0157:H7 / EDL933 / ATCC 700927;
 MEDLINE=95072311; PubMed=7765507;
 CHARACTERIZATION.
 CHARACTERIZATION.
 MEDLINE=94014977;
 Gen. Microbiol. 139:1795-1805(1993).
L; M93136; AAA24712.1; -...
L; M93413; AAA24717.1; -...
L; X66619; CAA47182.1; -...
L; X57434; CAA46682.1; -...
L; X6952; CAA49270.1; -...
L; U00006; AAC43134.1; -...
L; AE000477; AAC77010.1; -...
L; AE016770; AAN83436.1; -...
L; AE005637; AAA89239.1; -...
L; AE002568; BAB38446.1; -...
L; M96268; AAA17028.1; -...
 PATHWAY: Ubiquinone biosynthesis; second step.
SUBCELLULAR LOCATION: Integral membrane protein. Inner memorane protein. Inner memorantarity: BELONGS TO THE UBIA PRENYLTRANSFERASE FAMILY.
 = 3-octaprenyl-4-hydroxybenzoate.
COFACTOR: Magnesium.
 FROM N.A.
 PubMed=8155731;
 PubMed=8409922;
 moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
 Escherichia coli 0157:H7.";
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 Yokoyama K.,
Tobe T.,
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RESULT
EX24_AF
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Matches 4
 ARATH
EX24 ARJ
Q9FL76;
 -!- SUBCELLULAR LOCATION: COLA MILE STANSIN FAMILY.
-!- SIMILARITY: BELONGS TO THE EXPANSIN FAMILY.
-!- SIMILARITY: Contains 1 expansin-like CBD domain.
-!- SIMILARITY: Contains 1 expansin-like CBD domain.
-!- CAUTION: Ref.1 sequence differs from that shown
 TRANSMEM TRANSMEM TRANSMEM
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 Magnesium;
TRANSMEM
TRANSMEM
 Cosgrove D.J.;
Unpublished observations (DEC-2001)
-!- FUNCTION: Causes loosening and
 28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel: 41, Last seq
28-FEB-2003 (Rel. 41, Last ann
Putative alpha-expansin 24 pre
 "Structural analysis of Arabidopsis thaliana chromosome features of the regions of 1,381,565 bp covered by twent physically assigned pl and TAC clones.";
 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheo; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
 ExpAlpha-1.19).
EXP24 OR AT5G39310 OR K3K3.22 OR K3K3
 PIR; G91256; G91256.
PIR; JC2316; JC2316.
EcoGene; EG11370; ub
 MEDLINE=98344145; PubMed=9679202;
Kaneko T., Kotani H., Nakamura Y.,
 Arabidopsis thaliana (Mouse-ear
 SEQUENCE
 Ubiquinone biosynthesis; Transferase; Transmembrane; Inner membrane;
 PROSITE; PS00943; UBIA;
 TIGRFAMS;
 InterPro; IPR000537;
InterPro; IPR006370;
Pfam; PF01040; UbiA;
 EMBL;
 CONCEPTUAL
 Tabata S.;
 SEQUENCE FROM N.A.
 NCBI_TaxID=3702;
 gene model prediction.
DATABASE: NAME-EXPANSIN homepage;
WWW-"http://www.bio.psu.edu/expansins/"
 FUNCTION: Causes loosening and extension disrupting noncovalent bonding between matrix glucans. No enzymatic activity
 similarity)
 ARATH
 237
 X63407; CAA45003.1;
 w
 7 WGYYWSI
 4.
 Similarity
 WGOYWAV
 5:131-145(1998).
 TIGR01474;
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POTENTIAL.
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P26220;
01-MAY-1992
01-MAY-1992
15-SEP-2003
 DOMAIN
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SEQUENCE
 STRAIN=66 / 1326;
MEDLINE=92077439; PubMed=1743521;
Shareck F., Roy C. Yaguchi M., M.
"Sequences of three genes specify
 Streptomyces lividans.
Streptomyces lividans.
Bacteria; Actinobacteridae; Actinomycetales;
 15-SEP-2003 (Rel. 22, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Endo-1,4-beta-xylanase C precursor (EC 3.2.1.8)
(1,4-beta-D-xylan xylanohydrolase C).
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 EMBL; AB010694; BAB09386.1; ALT SEQ. InterPro; IPR007112; Expan_endogl.
 Hypothetical SIGNAL
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 between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no we modified and this statement is not removed. Usage by and for commercia
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 Gene
 SEQUENCE FROM N.A.,
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 ProDom; PD002179; Expan Lol pI C; 1.
PROSITE; PS50843; EXPANSIN_EG45; 1.
PROSITE; PS50842; EXPANSIN_EG45; 1.
 NCBI_TaxID=1916;
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 lividans.";
 InterPro;
 FUNCTION: Contributes to hydrolyze hemicellulose, the major component of plant cell-walls.
CONTALYTIC ACTIVITY: Endohydrolysis of 1,4-beta-D-xylosidic
 linkages in xylans.
PATHWAY: Xylan degradation.
SUBCELLULAR LOCATION: Secre
 SUBCELLULAR SIMILARITY:
 HYDROLASES).
 107:75-82 (1991) .
 Pro; IPR007112; Expan endog1.
Pro; IPR007118; Expan_Lol_pI.
Pro; IPR007117; Expan_Lol_pI_C.
Pro; IPR007117; Expan_Lol_pI_C.
 Similarity 5; Conserv
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 Score 38; DB
Pred. No. 33;
 EXPANSIN-LIKE EG45. EXPANSIN-LIKE CBD.
 PRT;
 FB3C64A2D529644B CRC64;
 Morosoli R.,
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protein; Mitochondrion; Transit peptide

MITOCHONDRION (POTENTIAL).

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 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content
 mitochondria.";
J. Biol. Chem. 276:21724-21736(2001).
 "Structural compensation for the deficit of rRNA with proteins in mammalian mitochondrial ribosome. Systematic analysis of protein components of the large ribosomal subunit from mammalian
 Suzuki T.,
 SEQUENCE FROM N.A. MEDLINE=21293042; PubMed=11279069;
 Eukaryota; Metazoa;
Mammalia; Eutheria;
 MOUSE
 PIR; JS0591; JS0591.
HSSP; P09850; JXMB:
InterPro; IPR001317; Glyco_hydro_11.
InterPro; IPR006311; Tat.
 EMBL; M64553; AAA26836.1;
EMBL; A25307; CAA01768.1;
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 EMBL; AB049637; BAB40842.1; -. MGD; MGI:2137211; Mrpl9.
 Mus musculus (Mouse)
 60S ribosomal
 Q99N94;
 TICRFAMS; TICRO1409; TAT signal seq; 1.
PROSITE; PS00776; GLYCOSYL_HYDROL_F11_1; 1.
PROSITE; PS00777; GLYCOSYL_HYDROL_F11_2; 1.
Xylan_degradation; Hydrolase; Glycosidase; Signal.
 FIAM; PF00457; Glyco_hydro_11; 1.
PRINTS; PR00911; GLHYDRLASE11.
 or send an email to license@isb-sib.ch).
 -!- SUBCELLULAR
 Watanabe
 MRPL9
 InterPro; IPR000244; Ribosomal_L9.
Pfam; PF01281; Ribosomal_L9_N; 1.
 NCBI_TaxID=10090;
 RM09 MOUSE
 178
 6; Conserv
 KTWGQYWAV
 KTFQQYWSV
 Terasaki M.,
 50
134
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240 AA;
 (Rel. 41, Created)
(Rel. 41, Last sequence update)
(Rel. 41, Last sequence update)
(Rel. 41, Last annotation update)
al protein L9, mitochondrial precursor
 Conservative
 STANDARD;
 BELONGS TO THE L9P FAMILY OF RIBOSOMAL PROTEINS.
 LOCATION:
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 Rodentia;
 Chordata;
 63.8%;
66.7%;
 Takemoto-Hori
 MW;
 Mitochondrial
 Score 37; DB Pred. No. 37; 2; Mismatches
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 ENDO-1,4-BETA-XYLANASE C.
NUCLEOPHILE (BY SIMILARITY).
PROTON DONOR (BY SIMILARITY)
 Sciurognathi; Muridae;
 Craniata; Vertebrata; Euteleostomi;
 FC663415780142CA CRC64;
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A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
A Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.F., Bhat N.K.,
A Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
A Hopkins R.F., Jordan R., Farmer A.A., Rubin G.M., Hong L.,
Boat S. R., Molley R.B., Bonaldo M.A., Rubin G.M., Hong L.,
A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunarathe P.H.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
A Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Generation and initial analysis of more than 15,000 full-length
 Matches
 Query Match
 RM09 HUMAN STANDARI
Q9BYD12 Q9BSW8;
28-FEB-2003 (Rel. 41, C
28-FEB-2003 (Rel. 41, I
15-SEP-2003 (Rel. 42, I
 EMBL; ; Genew;
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the European Bioinformatics Institute. The
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or send an email to license@isb-sib.ch).
 human and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 HUMAN
 CHAIN
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 -!- SUBCELLULAR LOCATION: Mitochondrial.
 -!- SIMILARITY: BELONGS TO THE L9P FAMILY OF RIBOSOMAL PROTEINS

 MEDLINE=22388257;
 SEQUENCE FROM N.A.
 mitochondria.";
 components of the large
 mammalian mitochondrial
 MEDLINE=21293042;
 SEQUENCE FROM N.A.
 Eukaryota; Metazoa;
Mammalia; Eutheria;
 MRPL9.
 SEQUENCE
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 "Structural
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 ribosomal protein
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 sapiens
 204
 AB049636; BAB40841.1;
BC004517; AAH04517.1;
; HGNC:14277; MRPL9.
 3 WGQYW 7
 4;
 Similarity
 Chem.
 WGEYW
 256 AA;
 compensation
 Conservative
 (Human)
 208
 276:21724-21736(2001)
 STANDARD;
 PubMed=12477932;
 PubMed=11279069;
 Chordata;
Primates;
 256 MW;
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 63.8%;
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L9, mitochondrial precursor (L9mt).
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 Last sequence update)
Last annotation updat
 ribosome. Systematic ribosomal subunit fro
 Takemoto-Hori
 for the deficit of rRNA with proteins in the ribosome. Systematic analysis of protein
 Score 37;
Pred. No.
 FEC2A2F8D1A1CB46 CRC64;
 Craniata; Vertebrata; Catarrhini; Hominidae
 PRT;
 Mismatches
 267
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 Hominidae; Homo
 Hanada T., Ueda
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RESULT 25
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P41032;
01-FEB-1995
 CONFLICT
 InterPro; IPR000244; Ribosomal L9.

Pfam; PF01281; Ribosomal L9 N; I.

Ribosomal protein; Mitochondrion; Transit peptide.

TRANSIT 7 9 MITOCHONDRION (POTENTIAL)

CHAIN 7 267 60S RIBOSOMAL PROTEIN L9.
 J. Bacteriol. 173:5876-5886(1991).
-i- FUNCTION: Part of the ABC transporter complex cysAWTP
-i.5.1) involved in sulfate/thiosulfate import. Pro-
responsible for the translocation of the substrate acr
 McClelland M., Sanderson K.E., Spieth J., Clifton S.W., Latreille P. Courtney L., Porwollik S., Ali J., Dante M., Du F., Hou S., Layman I. Leonard S., Nguyen C., Scott K., Holmes A., Grewal N., Mulvaney E., Ryan E., Sun H., Florea L., Miller W., Stoneking T., Nhan M., Waterston R., Wilson R.K.;
"Complete genome sequence of Salmonella enterica serovar Typhimurium".
 28-FEB-2003 (Rel. 41, La: 15-SEP-2003 (Rel. 42, La: Sulfate transport system CYSU OR CYST OR STM2443.
 "The cysP promoter of Salmonella typhimurium: characterization of binding sites for CysB protein, studies of in vivo transcription initiation, and demonstration of the anti-inducer effects of
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 initiation, and demonstration thiosulfate.";
 Salmonella typhimurium
 Hryniewicz M.M., Kredich N.M.
 MEDLINE=91358382; PubMed=1909324;
 STRAIN=LT2
 SEQUENCE
 Nature 413:852-856(2001).
 MEDLINE=21534948; PubMed=11677609;
 SEQUENCE FROM N.A
 Enterobacteriaceae;
 Bacteria; Proteobacteria;
 (cysA), two transmembrane proteins binding protein (cysP) (Probable). SUBCELLULAR LOCATION: Integral memb
 membrane (By similarity).
SUBUNIT: The complex is composed of
 SIMILARITY: BELONGS TO THE BINDING-PROTEIN-DEPENDENT TRANSPORT SYSTEM PERMEASE FAMILY. CYSTW SUBFAMILY.
 (Potential).
 216 WGEYW 220
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 Similarity 4; Conserv
 OF 1-15 FROM N.A.
 WGOYW 7
 210
267 AA;
 Conservative
 SGSC1412 / ATCC 700720;
 STANDARD;
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 41, Last sequence up 42, Last annotation
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 Salmonella.
 63.8%;
80.0%;
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 Integral membrane
 of Salmonella enterica serovar Typhimurium
 Gammaproteobacteria; Enterobacteriales;
 Score 37;
Pred. No.
 MITOCHONDRION (POTENTIAL)
60S RIBOSOMAL PROTEIN L9.
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EMBL; AE008810; AAL21337.1;

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DR StyGene; SG10520; cysU.

DR InterPro; IPR005667; Sulph_transpt2.

DR Pfam; PF00528; BPD_transp; 1.

DR TIGRFAMS; TIGR00965; 3a0106802; 1.

DR TIGRFAMS; TIGR00965; 3a0106802; 1.

DR TIGRFAMS; TIGR00965; Ja0106802; 1.

ET TRANSPORT; Sulfate transport; Membrane; Inner membrane; Transmembrane;

ET TRANSMEM 64 84 POTENTIAL.

ET TRANSMEM 136 156 POTENTIAL.

ET TRANSMEM 188 205 POTENTIAL.

ET TRANSMEM 243 263 POTENTIAL
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 GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
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Q8xgz7 salmonella
Q8whx9 psilotum nu
Q98r58 mycoplasma
Q9ur24 gaeumannomy
Q95dy2 cucumis sat
Q18533 schistosoma
Q8i080 crassostrea
Q8i1080 crassostrea
Q8i104 crassostrea
Q8i104 crassostrea
Q8i044 crassostrea
Q8i045 pseudoalter
Q8y9n5 aeropyrum p
Q9y8p3 vibrio chol
 Description
 Q9czb2 mus musculu
Q8qng3 ectocarpus
Q8rd90 thermoanaer
 3 ectocarpus
0 thermoanaer
7 salmonella
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Q9CZB2 I Q9CZB2 I ID Q9CZB2 I AC Q9CZB2; DT 01-JUN-2001 DT 01-JUN-2001 DT 01-JUN-2001

PRELIMINARY;

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(TrEMBLrel. 17, Created)
(TrEMBLrel. 17, Last sequence update)
(TrEMBLrel. 22, Last annotation update)

N/A. SI OR SI.

| 39                 | 39                 | 39                | 39     | 39     | 39     | 39     | 39                 | 39     | 39     | 39     | 39                 | 39                 | 39                 | 39     | 39                 | 39     | 39     | 39     | 40     | 40     | 40     | 40                 | 40     | 40     | 40                 | 40             | 40                 | 40                 |
|--------------------|--------------------|-------------------|--------|--------|--------|--------|--------------------|--------|--------|--------|--------------------|--------------------|--------------------|--------|--------------------|--------|--------|--------|--------|--------|--------|--------------------|--------|--------|--------------------|----------------|--------------------|--------------------|
| 67.2               | 67.2               |                   | 67.2   | •      | •      | •      |                    | 67.2   |        |        |                    |                    | 67.2               | 67.2   | 67.2               | 67.2   | 67.2   | 67.2   |        | 69.0   | •      | ٠                  | 69.0   |        | 69.0               | ٠              |                    | 69.0               |
| 469                | 461                | 432               | 406    | 367    | 367    | 366    | 362                | 358    | 358    | 347    | 335                | 335                | 282                | 236    | 228                | 191    | 73     | 73     | 1451   | 750    | 746    | 551                | 549    | 520    | 518                | 401            | 400                | 305                |
| ۲                  | ب                  | 14                | 9      | 13     | 13     | 13     | 13                 | 13     | 13     | 16     | ຎ                  | N                  | 16                 | 16     | N                  | 2      | 12     | 12     | თ      | N      | N      | 10                 | 16     | თ      | ហ                  | ഗ              | 16                 | Ν                  |
| 050200             | Q8NKR5             | Q8JZK3            | QBLTU1 | Q9DFC5 | Q9DD36 | Q9DFC6 | Q9W6I7             | Q9PW55 | Q9W6I6 | Q985T4 | Q9RMM4             | 008346             | Q8D655             | Q9RXG5 | Q59962             | Q9EW89 | Q9DWY8 | Q8QR33 | 001737 | Q9REP1 | Q8GF63 | Q8S5S5             | Q8CVV9 | Q8WSH2 | 002622             | <b>Q9В</b> ЈМЗ | P74474             | Q45818             |
| 050200 thermococcu | Q8nkr5 thermococcu | Q8jzk3 uncultured | æ      |        |        |        | Q9w6i7 brachydanio |        |        | 4      | Q9rmm4 streptomyce | O08346 streptomyce | Q8d655 vibrio vuln | 5      | Q59962 streptomyce | Ø      |        | ~      |        |        | N      | Q8s5s5 oryza sativ |        | a      | O02622 crassostrea | О              | P74474 synechocyst | Q45818 chloroflexu |

## ALIGNMENTS

| DR                  | DR | RL                        | RT                                                               | RA              | RA                                                                 | RA                                                                     | RA                                                                  | RA                                                           | RA                                                                | RA                                                                  | RA                                                              | RA                                                               | RA                                                               | RA | RA                                                                    | RA                                                             | RA                                                              | RA                                                                 | RA                                                                 | RA                                                                 | RA                                                                 | RX                                 | RC                              | RP                 | RN  | õ                 | გ                                                                  | ဂ္ဂ                                                               | 80                    |
|---------------------|----|---------------------------|------------------------------------------------------------------|-----------------|--------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|----|-----------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------|---------------------------------|--------------------|-----|-------------------|--------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------|
| MGD; MGI:98301; Si. |    | Nature 409:685-690(2001). | "Functional annotation of a full-length mouse cDNA collection."; | Hayashizaki Y.; | Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S., | Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., | Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch KF., | Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., | Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., | Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., | Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., | Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., | Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., |    | Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., | Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H., | Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., | Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., | Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., | Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., | Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., | MEDLINE=21085660; PubMed=11217851; | STRAIN=C57BL/6J; TISSUE=Embryo; | SEQUENCE FROM N.A. | [1] | NCBI_TaxID=10090; | Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | Mus musculus (Mouse). |

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QRESULT 3
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RM Hypc
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Best Local S
Matches 7
 Query Match
 STRAIN=EsV-1;
Delaroque N., E
"The complete r
 InterPro; 1...
Pfam; PP00801; PKD; 1.
SMART; SM00089; PKD; 1.
SMOSITE; PS50093; PKD; 1.
PROSITE; PS50093; PKD; 1.
 STRAIN=MB4 / JCM 11007;

MEDLINE=21992816; PubMed=11997336;

Bao Q., Tian Y., Li W., Xu Z., Xuan Z., Hu S., Don, Chen Y., Xue Y., Xu Y., Lai X., Huang L., Dong X., Tan H., Chen R., Wang J., Yu J., Yang H.;

"A complete sequence of T. tengcongensis genome.";

Genome Res. 12:689-700(2002).

GENBL, AE012988; AAM23457.1; --
 Q8RD90;
 Hypothetical
 SEQUENCE FROM N.A.
 Thermoanaerobacter tengcongensis.
Bacteria; Firmicutes; Clostridia; Thermoanaerobacteriales;
 Hypothetical TTE0156.
 Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases. EMBL; AF204951; AAK14534.1; -. Pfam; PF04451; Capsid Iridovir; 1. SEQUENCE 476 AA; 53212 MW; A6F5C92F3C92526D CRC64;
 genome.";
Submitted
 Viruses; dsDNA viruses,
NCBI_TaxID=37665;
 Ectocarpus siliculosus virus.
 01-MAR-2003
 01-JUN-2002
 01-JUN-2002
 Q8QNG3;
 Q8QNG3
 NCBI_TaxID=119072;
 Thermoanaerobacteriaceae;
 SEQUENCE FROM
 202
 153
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 N
 6; Conserv
 7; Conserv
 TWGDYWAL
 TWGQYWAV 9
 KTWGKYWQV 161
 KTWGQYWAV
 (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
 (TTEMBLrel. 21, Created)
(TTEMBLrel. 21, Last sequence update)
(TTEMBLrel. 22, Last annotation update)
protein TTE0156.
 Conservative
 Conservative
 protein; Complete proteome.

B AA; 11135 MW; 01317FFC55898A13 CRC64;
 PRELIMINARY;
 PRELIMINARY;
 N.A.
 Bothe G., I nucleotide
 Capsid Iridovir; 1.
AA; 53212 MW; A6F5C92F3C92526D
 209
 77.6%;
 84.5%;
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 21,
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23,
 Pohl T.,
 domain
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 Thermoanaerobacter
 RNA stage;
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 Score 45; DB Pred. No. 29; 1; Mismatches
 Created)
 Score 49;
Pred. No.
Score 42;
 PRT;
 7EC0A06C63212674
 Mismatches
 Knippers R., Mueller
e of the Ectocarpus si
 annotation update)
 sequence update)
 476
 Phycodnaviridae; Phaeovirus
 98
 DB 11;
9.2;
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 s R., Mueller D.G., Boland W.;
Ectocarpus siliculosus virus
16;
 12;
 1;
 <u>,</u>
 Dong W., Y.
 CRC64;
Length
 Length 476;
 Length 626;
 Indels
 98;
 Yang J.,
Ling L.,
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 Gaps
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RESULT 5
Q8WHX9
ID Q8WH
AC Q8WH

Q8WHX9;

PRELIMINARY;

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Q8XGZ7
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 Matches
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 Q8XGZ7;
Q8XGZ7;
01-MAR-2002
 Parkhill J., Dougan G., James K.D. Thomson N.R., Pickard D., Wain Churcher C., Mungall K.L., Bentley S.D., Holden M.T.G., Sebaihia M. Baker S., Basham D., Brooks K., Chillingworth T., Connerton P., Cronin A., Davis P., Davies R.M., Dowd L., White N., Farrar J., Feltwell T., Hamlin N., Haque A., Hien T.T., Holroyd S., Jagels K., Krogh A., Larsen T.S., Leather S., Moule S., O'Gaora P., Parry C., Quail M., Rutherford K., Simmonds M., Skelton J., Stevens K., Whitehead S., Barrell B.G.,
 EMBL;
 SEQUENCE FROM N.A.
SPECIES=S.typhimurium; STRAIN=LT2 /
MEDLINE=21534948; PubMed=11677609;
 Ryan E., Sun H., Florea L. Waterston R., Wilson R.K.; "Complete genome sequence"
 McClelland M., Sanderson K.E., Spieth J., Clifton S.W., Latre
Courtney L., Porwollik S., Ali J., Dante M., Du F., Hou S., L
Leonard S., Nguyen C., Scott K., Holmes A., Grewal N., Mulvan
Ryan E., Sun H., Florea L., Miller W., Stoneking T., Nhan M.,
 01-MAR-2002
01-MAR-2003
 Transferase; Complete proteome.
SEQUENCE 290 AA; 32602 MW;
 TIGREAMS; TIGRO1474; ubiA
PROSITE; PS00943; UBIA; 1
 EMBL;
 Nature 413:848-852(2001)
 "Complete genome sequence of a enterica serovar Typhi CT18.";
 SPECIES=S.typhi; STRAIN=CT18;
MEDLINE=21534947; PubMed=11677608;
 SEQUENCE FROM N.A.
 Nature 413:852-856(2001).
 NCBI_TaxID=602,
 Enterobacteriaceae; Salmonella
 Bacteria; Proteobacteria;
 Salmonella typhi.
 Salmonella typhimurium,
 (4-hydroxybenzoate octaprenyl transferase) UBIA OR STM4234 OR STY4430.
 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
P-hydroxybenzoate: octaprenyltransferase (EC 2.5.1.-)
 Pfam; PF01040; UbiA;
 InterPro; IPR000537; InterPro; IPR006370;
 4
 rocar
237
 AE008898; AAL23058.1; -. AL627282; CAD09218.1; -.
 35
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 Similarity 6; Conserv
 6,
 MGQYWAV
 KIWGTYWA 42
 KTWGQYWA
 MGYYWAV
 (TrEMBLrel. 20, Created)
(TrEMBLrel. 20, Last sequence update)
(TrEMBLrel. 23, Last annotation updat
 Conservative
 Conservative
 (TrEMBLrel.
 PRELIMINARY;
 601;
243
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 UbiA.
 ubiA_proteo;
 85.7%;
 UbiA_proteo
 75.0%;
 72.4%;
 and
 of a multiple drug resistant Salmonella
 of Salmonella enterica serovar Typhimurium
 Gammaproteobacteria; Enterobacteriales;
 0,
 0
 Pred. No.
 Score 42;
 Pred. No. 52;
 OBA199F902C6C673 CRC64;
 Mismatches
 Mismatches
 SGSC1412 / ATCC 700720;
 290
 18;
 BB
 A
 16;
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 Length 290;
 Indels
 Indels
 Mulvaney E.,
 Latreille
S., Layman
 atreille P.,
., Layman D.,
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 Wain J
hia M.,
 Gaps
 Gaps
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RESULT Q98758
ID R758

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 "The complete join Mycoplasma pulmonis.";
Nucleic Acids Res. 29:2145-2153(2001).

REMBL; AL445563; CAC13325.1; -.

R Mypulist; MYPU 1520; -.

R InterPro; IPRO01708; 60kDa innermeb.

R Pfam; PF02096; 60kD IMP; 1.

 Query Match
Best Local S
Matches 5
 Query Match
Best Local :
 Matches
 Q98R58;
Q98R58;
01-OCT-2001
 01-MAR-2002
01-MAR-2002
01-MAR-2003
 u-OCT-2001 (TrEMBLrel. 18, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
Hypothetical protein MYPU_1520.
MYPU_1520.
 Chloroplast.
Chloroplast.
310 AA;
 Psilotum nudum.";
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ
EMBL; AP004638; BAB84273.1;
InterPro; IPR002541; Cytc_asm.
InterPro; IPR003557; Cytc_biog_CcmC.
Pfam; PF01578; Cytc_asm; I.
 CCSA.
 STRAIN=cv. Kingyoku;
Wakasugi T., Nishikawa A.,
 rsilotophyta; Psilotales;
NCBI_TaxID=3240;
 Blanchard A.;
 STRAIN=UAB CTIP;
MEDLINE=21267165; PubMed=11353084;
Chambaud I., Heilig R., Ferris S., Barbe V., Sa
Moszer I., Dybvig K., Wroblewski H., Viari A.,
 SEQUENCE FROM N.A.
 Bacteria; Firmicutes; Mollicutes; Mycoplasmataceae; Mycoplasma.
 Mycoplasma
 PRINTS; PR01386; CCMCBIOGNSIS.
 SEQUENCE FROM N.A
 "Complete nucleotide sequence
 Eukaryota; Viridiplantae;
 Chloroplast
 Psilotum nudum (Whisk
 σ
 349
 239
 N
 1 KTWGQYWA 8
 Similarity 5; Conserv
 Similarity
5; Conserv
 ETWGSYWS 246
 TWGQYW 7
 pulmonis.
 c biosynthesis protein.
 (TrEMBLrel. 20, Created)
(TrEMBLrel. 20, Last sequence update)
(TrEMBLrel. 23, Last annotation update)
 Conservative
 Conservative
 PRELIMINARY;
354
 35848 MW;
 72.4%;
 72.4%;
83.3%;
 fern).
 Streptophyta; Embryophyta; Tracheophyta; Psilotaceae; Psilotum.
 Yamada
 2;
 Score 42; DB 16;
Pred. No. 1.1e+02;
1; Mismatches 0
 Pred.
 Score 42;
Pred. No.
 of.
 PRT;
 proteome.
E49F2EFDE924E4AD CRC64;
 35BDB639F1C44C43 CRC64;
 Mismatches
 a K.,
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 DB 8;
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 Length 310;
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RESULT

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RESULT
Q95DY2
 90 UVZ4
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 SEQUENCE FROM N.A.

Ullanat R.;
Thesis (2000), Department of Biochemistry,
Indian Institute of Science, Bangalore, India
R EMBL; AJ318074; CAC41004.1; -.
R InterPro; IPR002541; CytC_asm.
 Matches
 Query Match
 01-DEC-2001
01-DEC-2001
01-MAR-2002
 Q9UVZ4;
Q9UVZ4;
01-MAY-2000
 Emami K.;

"PCR-based characterization of fungal xylanase genes.";

Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

-!- CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1,4-BETA-D-XYLOSIDIC
Pfam; PF01578; CytC_asm; Chloroplast.
SEQUENCE 260 AA; 2997.
 SEQUENCE FROM N.A.
Ullanat R., Jayabaskaran (
"Evidence for a divergent of cucumber.";
 Spermatophyta; Magnoliophyta; eudicotyleceurosids I; Cucurbitales; Cucurbitaceae;
 Chloroplast.
 SEQUENCE
 InterPro; 15000-11; 1.
Pfam; PF00457; Glyco hydro 11; 1.
PROSITE; PS00776; GLYCOSYL HYDROL F11 1; 1.
PROSITE; PS00776; GLYCOSYL HYDROL F11 1; 1.
 EMBL;
 LINKAGES IN XYLANS.
-!- PATHWAY: XYLAN DEGRADATION.
-!- SIMILARITY: BELONGS TO CELL
HYDROLASES).
 Eukaryota; Fungi; Ascomyo
Sordariomycetes incertae
 Gaeumannomyces graminis.
Eukaryota; Fungi; Ascomycota;
 01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Endo-1,4-beta-xylanase (EC 3.2.1.8) (Fragment).
 Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases
 of cucumber.
 Eukaryota; Viridiplantae;
 Cucumis sativus (Cucumber).
 Q95DY2;
 Q95DY2
 AXYL2
 NCBI_TaxID=3659;
 Putative cytochrome-c
 NON_TER
 SEQUENCE FROM N.A.
 NCBI_TaxID=29850;
 HSSP; P09850; 1XNB.
 InterPro; IPR001137; Glyco_hydro_11.
 8
 Local
 TER
 AJ249160; CAB53513.1;
 80
 1 KTWGQYWAV
 Similarity 6; Conserv
 KTFNOYWAI 88
 116 AA;
 116
 (TrEMBLrel. 19, Created)
(TrEMBLrel. 19, Last sequence update)
(TrEMBLrel. 20, Last annotation updat
 Jayabaskaran C.;
 Conservative
 PRELIMINARY;
 PRELIMINARY;
 116
 29974 MW;
 70.7%;
 12791 MW;
 synthesis associated protein.
 sedis;
 Streptophyta; Embryoyta; eudicotyledons;
 gene-arrangement in
 CELLULASE
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 Score 41;
Pred. No. 3
 Pezizomycotina; Sordariomycetes;
 PRT;
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 24018417B5C53731 CRC64;
 DA7BA4FEA6770E9E CRC64;
 Magnaporthaceae;
 Mismatches
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 DB 3;
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 Embryophyta; Tracheophyta;
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RESULT 10
Q81080
ID Q8108
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 InterPro; IPR000668; Peptidase_C1.
InterPro; IPR000169; SHprot acsite.
Pfam; PF00112; Peptidase_C1; 1.
PRINTS; PR00705; PAPAIN.
PRODOm; PD000158; Peptidase_C1; 1.
PRODOm; PD000158; Peptidase_C1; 1.
SMART; SM00645; Pept_C1; 1.
PROSITE; PS00639; THIOL_PROTEASE_CYS; 1.
PROSITE; PS00639; THIOL_PROTEASE_HIS; 1.
Hydrolase; Protease; Signal; Thiol_protease.
SIGNAL 1 22 POTENTIAL.
 Q81080;
Q81080;
01-MAR-2003
 018533
018533;
01-MAR 2003 (TrEMBLrel. 23, Create 01-MAR 2003 (TrEMBLrel. 23, Last s 01-MAR 2003 (TrEMBLrel. 23, Last a Alpha amylase (EC 3.2.1.1) (Fragme AMY.
 CHAIN
SEQUENCE
 Brindley P.J.;
"Cathepsin C from Schistosoma japonicum: cDNA encoding preproenzyme and phylogenetic relationships.";
Eur. J. Biochem. 255:527-534(1998).
EMBL; U77932; AAC32040.1; -.
 01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Preprocathepsin C precursor (EC 3.4.14.1).
Schistosoma japonicum (Blood fluke).
Sukaryota; Metazoa; Platyhelminthes; Trematoda; Dig
 Brindley P.J., Kalinna B.H., Dalton J.P., Smythe M.L., McManus D.P., "Proteolytic degradation of host hemoglobimol. Biochem. Parasitol. 89:1-9(1997).
 Hola-Jamriska L., Tort J.F., Dalton J.P.,
 SEQUENCE FROM N.A.
 STRAIN=Chinese;
MEDLINE=97442731; PubMed=9297696;
 NCBI_TaxID=6182;
 Schistosomatoidea; Schistosomatidae; Schistosoma.
 MEROPS; C01.070;
 MEDLINE-98409270;
 SEQUENCE FROM N.A.
 9
 425
 187
 1 KTWGQYW 7
 2 TWGQYW 7
 Similarity
 Similarity 5; Conserv
 <u>ن</u>
 SWGQYW 430
 ETWGSYW 193
 222
458 AA;
 Conservative
 Conservative
 PRELIMINARY;
 PRELIMINARY;
 degradation of host hemoglobin by schistosomes.", Parasitol. 89:1-9(1997).
 458 (
52698 MW;
 70.7%;
 70.7%;
71.4%;
 Last sequence update)
Last annotation update)
(Fragment).
 Created)
 Score 41; DB
Pred. No. 1.2e
1; Mismatches
 Score 41; DB
Pred. No. 67;
1; Mismatches
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 POTENTIAL.
CATHEPSIN C.
; ADA9765666C4142C CRC64;
 PRT;
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 Trematoda; Digenea;
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RESULT 12 QBIOT4 ID QBIOT AC QBIOT

Q810T4 Q810T4;

PRELIMINARY;

PRT;

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RESULT 11
Q8I7E8
 ID DOC OCCUPANT OCCUP
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 S
 Matches
 Matches
 Query Match
 Query Match
Best Local :
 "Structure of the amylase oyster Crassostrea gigas: polymorphism.";
 01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Alpha amylase (EC 3.2.1.1) (Fragment).
 Q817E8;
Q817E8;
 Glycosidase; Hydrolase.
NON_TER 1 1
NON_TER 214 214
 Ostreoidea; Ostreidae; Crassostrea.
NCBI_TaxID=29159;
 Crassostrea gigas (Pacific oyster).
Eukaryota; Metazoa; Mollusca; Bivalvia;
 polymorphism.";
Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases
 SEQUENCE FROM N.A. Van Wormhoudt A.E.; Submitted (JUL-2002)
 Ostreoidea; Ostre
NCBI_TaxID=29159;
 Hydrolase; Glycosidase.
NON_TER 1 1
NON_TER 216 216
 Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases EMBL; AJ496597; CAD43096.1; -.
 SEQUENCE FROM N.A. Sellos D.A.;
 SEQUENCE FROM N.A. Van Wormhoudt A.E.; Submitted (JUL-2002)
 SEQUENCE
 EMBL;
 oyster Crassostrea
 Sellos D.A.;
 Eukaryota; Metazoa; Mollusca; Bivalvia; Pteriomorphia; Ostreoida;
Ostreoidea; Ostreidae; Crassostrea.
 SEQUENCE
 EMBL;
 SEQUENCE
 "Structure of the amylase
 Local
 135
135
 AJ496599; CAD43098.1; -. AJ496601; CAD43100.1; -.
 Similarity
5; Conserv
 Similarity
5; Conserv
 FROM N.A
 KTWGQYWAV
 KIWGEQWGM 143
 KTWGQYWAV 9
KTWGEQWGM
 214
214 AA;
 216
216 AA;
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 PRELIMINARY;
143
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 gigas:
 24314 MW;
 24442 MW;
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55.6%;
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 Pseudoalteromonas sp. strain CY24.";
Submitted (SEP-2002) to the EMBL/GenBank/DDBJ
EMBL; AY150179; AAN39119.1; -.
 NCBI_TaxID=210426;
 EMBL;
 "Structure of the amylase oyster Crassostrea gigas:
 Crassostrea gigas (Pac
Eukaryota; Metazoa; Mo
Ostreoidea; Ostreidae;
 SEQUENCE
 STRAIN=CY24;
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 Bacteria; Proteobacteria;
 Pseudoalteromonas sp. CY24.
 Extracellular
 01-MAR-2003
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 SEQUENCE
 Chu Y., Yu W.G., Han F.;
"Cloning and Sequencing of an Extracellular Agarase Gene
 Alteromonadaceae;
 polymorphism.";
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 SEQUENCE FROM N.A. Van Wormhoudt A.E.
 NCBI_TaxID=29159;
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 tted (JAN-2003) to the EM AJ496596; CAD43095.1; -. AJ496598; CAD43097.1; -. AJ496600; CAD43099.1; -.
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 Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A., Poosfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller L., Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K., Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C., Welch R.A., Blattner F.R.;
"Genome sequence of enterchaemorrhagic Escherichia coli O157:H7.";
Nature 409:529-533(2001).
 MEDLINE-99310339; PubMed=10382966;
Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haik Jin-no K., Takahashi M., Sekine M., Baba S.-I., Ankai A. Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K Nakamura Y., Nomura N., Sako Y., Kikuchi H.,
 STRAIN=0157:H7 / RIMD 0509952;

MEDLINE=21156231; PubMed=11258796;

Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoya:
Hayashi T., Makino E., Ohnishi M., Kurata T., Tanaka M., Tobe T.
Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunac
Kuhara S., Shiba T., Hattori M., Shinagawa H.;

"Complete genome sequence of enterohemorrhagic Escherichia coli
0157:H7 and genomic comparison with a laboratory strain K-12.";

DNA Res. 8:11-22(2001).
 crenarchaeon, Aeropyrum pernix DNA Res. 6:83-101(1999).
 NCBI_TaxID=56636;
 APE2253.
 01-NOV-1999 (TrEMBLrel.
01-NOV-1999 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
276AA long hypothetical
 Q9Y9N5;
 Q9Y9N5
 Hypothetical protein; Complete SEQUENCE 264 AA; 29288 MW;
 SEQUENCE FROM
 Desulfurococcaceae;
 Archaea; Crenarchaeota;
 Aeropyrum pernix.
 EMBL;
 MEDLINE=21074935; PubMed=11206551; Perna N.T., Plunkett G. III, Burland V.,
 SEQUENCE
 Enterobacteriaceae;
 Bacteria; Proteobacteria;
 Escherichia coli
 01-MAR-2002
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01-MAR-2002
 "Complete genome sequence of an aerobic hyper-thermophilic
 SEQUENCE FROM N.A.
 NCBI_TaxID=83334;
 Z3480 OR ECS3110.
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 AE005454; AAG57356.1; -. AP002560; BAB36533.1; -.
 Similarity
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al protein 234
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RESULT 17
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 Q45818;
Q45818;
01-NOV-1996
 STRAIN=El Tor N16961 / Serotype 01;
MEDLINE=20406833; PubMed=10952301;
Heidelberg J.F., Elsen J.A., Nelson W.C., Clayton R.A., Gwinn M.L.,
Dodson R.J., Haft D.H., Hickey E.K., Peterson J.D., Umayam L.A.,
Gill S.R., Nelson K.E., Read T.D., Tettelin H., Richardson D.,
GILl S.R., Nelson K.E., Read T.D., Tettelin H., Dragoi I., Sellers P.,
Ermolaeva M.D., Vanathevan J., Bass S., Qin H., Dragoi I., Sellers P.,
McDonald L., Utterback T., Fleischmann R.D., Nierman W.C., White O.,
Salzberg S.L., Smith H.O., Colwell R.R., Mekalanos J.J., Venter J.C.,
Fraser C.M.,
 Q9KPY3;
 Pfam; PF00528; BPD_transp; 1.
Complete proteome.
SEQUENCE 276 AA; 31573 MW;
MEDLINE=94192803;
 SEQUENCE FROM N.A. STRAIN=J10-FL;
 Chloroflexus aurantiacus.
Bacteria; Chloroflexi; Chloroflexales;
 Hypothetical
 01-NOV-1996
01-MAR-2003
 Pfam; PF00310; GATase_2; 1.
Hypothetical protein; Complete
SEQUENCE 281 AA; 31824 MW;
 Nature 406:477-483(2000).
EMBL; AE004294; AAF95373.1;
TIGR; VC2229; -.
 cholerae.
 NCBI_TaxID=666;
 Bacteria; Proteobacteria;
Vibrionaceae; Vibrio.
 Vibrio cholerae.
 Hypothetical VC2229.
 01-MAR-2003
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 NCBI_TaxID=1108;
 nterPro;
 DNA sequence of both chromosomes
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 RTWGQTWSL
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 IPR000515; BPD_transp.
 IPR000583; GATase_2.
) (TrEMBLrel. 15, 0) (TrEMBLrel. 15, 1) (TrEMBLrel. 23, 1) (TrEMBLrel. 23, 1) protein VC2229.
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1 33.7 kDa protein (BchGc).
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RESULT 19
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 MEDIINE=20433268; PubMed=10976061;
Xiong J., Fischer W.M., Inoue K., Nakahara M., Bauer C.E.;
"Molecular evidence for the early evolution of photosynthesis.";
Science 289:1724-1730(2000).
SCHENCE, Z34000; CAA8369.1; -.
EMBL; A7288602; AAG15233.1; -.
EMBL; A7288602; AAG15233.1; -.
InterPro; IPR006372; Chl synth.
InterPro; IPR00637; UbiA.
Pfam; PF01040; UbiA; 1.
 "Sequence analysis of the genome of the unicellular cyanobacterium Synechocystis sp. strain PCC6803. II. Sequence determination of the entire genome and assignment of potential protein-coding regions."; DNA Res. 3:109-136(1996).
 Kaneko T., Sato S., Kotani H., Tanaka A., Asamizu E., Nakamura Y., Miyajima N., Hirosawa M., Sugiura M., Sasamoto S., Kimura T., Hosouchi T., Matsuno A., Muraki A., Nakazaki N., Naruo K., Okumura Shimpo S., Takeuchi C., Wada T., Watanabe A., Yamada M., Yasuda M.,
 Carboxypeptidase; SEQUENCE 400 AA;
 SEQUENCE FROM N.A. MEDLINE=97061201; PubMed=8905231;
 01-FEB-1997
01-FEB-1997
 InterPro; IPR001466; Beta_lactamase.
Pfam; PF00144; beta-lactamase; 1.
 EMBL;
 NCBI_TaxID=1148;
 Synechocystis sp.
 SLR1924.
 01-MAR-2003
 P74474;
 P74474
 Hypothetical protein. SEQUENCE 305 AA; 33674 MW;
 TIGREAMS; TIGR01476; chlor_syn_BchG;
 FEBS Lett.
 Niedermeier G.,
 SEQUENCE FROM N.A.
 "The primary
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 Similarity 5; Conserv
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 WGQYW 250
 WGQYW 7
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 Cyanobacteria; Chroococcales;
 342:61-65(1994).
 69.0%;
ilarity 100.0%;
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 y structure of two chlorosome proteins from Chloroflexus
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 PRELIMINARY;
 Shiozawa J.A., Lottspeich F., Feick R.G.;
 Complete proteome.
; 44316 MW; 75510481820E462F CRC64;
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 Glycosidase;
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 gigas.";
Submitted (SEP-1996) to the
EMBL; Y08370; CAA69658.1; -.
HSSP; P00690; 1JFH.
 SMART;
 TISSUE=Digestive gland, Moal J., Daniel J.Y., Le Samain J.F.,
 01-JUL-1997 (TrEMBLrel. 04,
01-JUL-1997 (TrEMBLrel. 04,
01-MAR-2003 (TrEMBLrel. 23,
Alpha-amylase precursor (EC
 ProDom; PD000158; Peptidase_C1; 1.
SMART; SM00645; Pept C1; 1.
PROSITE; PS00139; THIOL_PROTEASE_CYS; 1.
PROSITE; PS00639; THIOL_PROTEASE_HIS; 1.
Hydrolase; Protease; Thiol protease.
 Crassostrea gigas (Pacific oyster)
Eukaryota; Metazoa; Mollusca; Biva
 EMBL; AF331036; AAK16514.1; HSSP; P43235; 1MEM.
 Guiliano D.B., Blaxter M.L., Williams S.A., Lustigman S "Characterization of a Novel Developmentally Regulated Cysteine Proteinases from Filarial Nematodes."; Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases
 SEQUENCE FROM N.A. Guiliano D.B., Bla:
 SEQUENCE
 Pfam; PF00128; alpha-amylase; 1.
Pfam; PF02806; alpha-amylase C; 1.
PRINTS; PR00110; ALPHAAMYLASE.
 SEQUENCE FROM N.A.
 Ostreoidea;
 AMY.
 Hydrolase;
SEQUENCE
 InterPro; IPR000668; Peptidase C1.
InterPro; IPR000169; Shprot acsite.
Pfam; PF00112; Peptidase C1; 1.
PRINTS; PR00705; PAPAIN
 Onchocercidae; C
NCBI_TaxID=6282;
 InterPro; IPR006047; Alpha amyl_cat.
InterPro; IPR006589; Alp_amyl_cat_su
InterPro; IPR006046; Glyco_hydro_13.
 InterPro; IPR006048; Alpha_amyl_C.
 "Control of the expression of the amylase
 NCBI_TaxID=29159;
 MEROPS; C01.055;
 Eukaryota; Metazoa; Nematoda;
 Onchocerca volvulus.
 01-MAR-2003 (TrEMBLrel. 23, Last annotation Cathepsin L-like cysteine proteinase.
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 SM00632; Aamy C; 1.
idase; Hydrolase; Signal.
 SM00642; Aamy;
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 KTWGQYWAV 9
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 Ostreidae; Crassostrea.
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 Score 40; DB 5;
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 SEQUENCE FROM N.A.

STRAIN=06:H1 / CFT073 / ATCC 700928;

MEDLINE=22388234; PubMed=12471157;

Welch R.A., Burland V., Plunkett G. III, Redford P.,

Rasko D., Buckles E.L., Liou S.-R., Boutin A., Hacket

Mayhew G.F., Rose D.J., Zhou S., Schwartz D.C., Perna

Mobley H.L.T., Donnenberg M.S., Blattner F.R.;

"Extensive mosaic structure revealed by the complete of uropathogenic Escherichia coli.";
 Crassostrea gigas.";
Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF320689; AAL37183.1; -
InterPro; IPR006048; Alpha_amyl_C.
InterPro; IPR006047; Alpha_amyl_cat.
InterPro; IPR006089; Alp amyl_cat sub.
InterPro; IPR006086; Glyco_hydro_T3.
 Bacteria, Proteobacteria,
Enterobacteriaceae, Esches
NCBI TaxID=217992,
 PRINTS; PRO0110; ÂLPHAAMYLASĒ.
SMART; SM00642; Aamy; 1.
SMART; SM00632; Aamy_C; 1.
Hydrolase; Glycosidase.
SEQUENCE 520 AA; 57713 MW;
 01-MAR-2002 (TrEMBLrel. 20,
01-MAR-2003 (TrEMBLrel. 23,
Alpha amylase A (EC 3.2.1.1)
 Hypothetical pyraQ OR C2769.
 Sellos D.Y., Van Wormhoudt F
"Structure and polymorphism
 Crassostrea gigas (Pacific oyster).
Eukaryota; Metazoa; Mollusca; Bivalvia;
 Q8WSH2;
01-MAR-2002
 Escherichia coli 06.
 01-MAR-2003
 Ostreoidea; Ostreidae; Crassostrea.
 Q8WSH2
 Pfam; PF00128; alpha-amylase;
Pfam; PF02806; alpha-amylase_
 SEQUENCE
 NCBI_TaxID=29159;
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Hypothetical protein.
 Q8S5S5;
 STRAIN-cv. Nipponbare;
McComble W.R., Spiegel L., de la Bastide M., Prei
Kuit K., Nascimento L., Zutavern T., Balija V., I
Santos L., Miller B., Katzenberger F., Muller S.
Sintos L., Miller B., Katzenberger F., Muller S.
Dike S., O'Shaughnessy A., Palmer L., Deddha N.;
 "Genomic sequence for Oryza sativa, Nipponbare strain, clone 0J1208D02, from chromosome 10, complete sequence."; Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases. EMBL, AC107314, AAM08619.1; -. Gramene; Q8S5S5; -. Gramene; -. G
 EMBL; AE016763; AAN81223.1;
Hypothetical protein; Comple
SEQUENCE 549 AA; 61590 M
Seo J., Park H., Kim H., Wang K., Yoon K., Rhee H., Kang Kim M., Park C., An Y., Choi E.; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases. EMBL; AY057845; AAL36103.1; -.
 STRAIN=ZM4;
 SEQUENCE FROM N.A.
 Sphingomonadaceae;
NCBI_TaxID=542;
 Bacteria; Proteobacteria; Alphaproteobacteria; Sphingomonadales;
 Q8GF63
 Pfam; PF00854; PTR2;
 Oryza sativa (japonica cultivar-group).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
 01-UN-2002 (TYEMBLrel. 21, Created)
01-UN-2002 (TYEMBLrel. 21, Last sequence update)
01-MAR-2003 (TYEMBLrel. 23, Last annotation update)
Putative proton-dependent oligopeptide transport.
 Plasmid 1.
 NCBI_TaxID=39947;
 EQUENCE FROM N.A.
 ymomonas mobilis.
 Local Similarity
les 5; Conserv
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 PS01023; PTR2_2; 1.
551 AA; 59912 MW;
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atzenberger F., Muller S., King
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 AD899A43ADF31BB6
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 Hypothetical protein; Plasmid. SEQUENCE 746 AA; 81269 MW;
 InterPro; IPR000531; TonB_boxC.
Pfam; PF00593; TonB dep Rec; 1.
Membrane; Outer membrane; Receptor;
SEQUENCE 750 AA; 82315 MW; 27272
 "Sequence analysis of 42B3 fosmid clone of Zymomonas mobilis."; Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
 EMBL; AF213822; AAF23804.1;
 Um H.W., Kang H.S.;
 STRAIN=ZM4;
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 Bacteria; Proteobacteria; Alphaproteobacteria; Sphingomonadales;
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FILE 'HCAPLUS' ENTERED AT 15:32:48 ON 25 AUG 2003 Ļ2 86 S L1

51 SEA ABB=ON PLU=ON L2(L)(?MELANOM? OR ?NEOPLAS? OR L4?CANCER? OR ?CARCIN? OR ?TUMOUR? OR ?TUMOR?)

ANSWER 1 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

2003:330613 HCAPLUS

DOCUMENT NUMBER:

139:99547

TITLE:

Stimulation of tumor-reactive T lymphocytes using mixtures of synthetic peptides derived from tumor-associated antigens with diverse MHC

binding affinities

AUTHOR(S):

Riley, John P.; Rosenberg, Steven A.; Parkhurst,

Maria R.

CORPORATE SOURCE:

Surgery Branch, National Institutes of Health,

National Cancer Institute, Bethesda, MD,

SOURCE:

20892-1502, USA Journal of Immunological Methods (2003),

276(1-2), 103-119

CODEN: JIMMBG; ISSN: 0022-1759

PUBLISHER:

Elsevier Science B.V.

DOCUMENT TYPE:

Journal

English LANGUAGE:

The use of reverse immunol. may be necessary to identify new tumor-assocd. antigens, particularly for cancers, against which tumor-reactive T cell populations have been difficult to establish. One approach has been to screen peptides derived from a candidate antigen with high major histocompatibility complex (MHC) binding affinities for the induction of tumor-reactive T lymphocytes in vitro. However, many candidate antigens that are overexpressed in tumors are non-mutated self-proteins, and unlike foreign or mutated proteins, immunodominant epitopes may not be expressed at high d. on the surface of tumor cells. Therefore, to identify tumor-assocd. epitopes, it may be necessary to screen large panels of peptides with wide ranges of MHC binding affinities. The current methodol. of stimulating peripheral blood lymphocytes (PBL) from donors expressing the MHC mol. of interest with individual peptides is impractical for screening such large panels. Therefore, the authors evaluated the use of mixts. of peptides with variable MHC binding affinities for the induction of tumor-reactive T lymphocytes with the melanoma antigens gp100 and an alternate isoform of tyrosinase-related protein 2 (TRP2-6b) as models. A mixt. of 10 known human leukocyte antigen (HLA)-A\*0201-restricted peptides from gp100 induced melanoma-reactive cytotoxic T lymphocyte (CTL) from multiple patients with metastatic melanoma. The majority of these T cell populations recognized the known immunodominant epitopes qp100:209-217 and qp100:280-288, even though the HLA-A\*0201 binding affinities of these peptides were much lower than other peptides in the mixt. Similarly, melanoma-reactive CTL were generated with a mixt. of HLA-A\*0201-restricted peptides from TRP2-6b, and these responses were directed against the previously identified tumor-assocd. epitopes TRP2-6b:180-188, TRP2-6b:288-296 and TRP2-6b:403-411. Thus, the use of peptide mixts. may facilitate the identification of new tumor-assocd. antigens through the application

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 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
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 (tumor-reactive T cells stimulation using mixts. of
 synthetic peptides derived from tumor-assocd. antigens
 with diverse MHC binding affinities for new antigens screening)
 71
 THERE ARE 71 CITED REFERENCES AVAILABLE
REFERENCE COUNT:
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT
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 ANSWER 2 OF 51
 2003:242452 HCAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
 138:282427
 Gene expression profiles useful in methods of
TITLE:
 diagnosis of cancer compositions and methods of
 screening for modulators of cancer
 Afar, Daniel; Aziz, Natasha; Gish, Kurt C.;
INVENTOR(S):
 Hevezi, Peter A.; Mack, David H.; Wilson, Keith
 E.; Zlotnik, Albert
 EOS Biotechnology, Inc., USA
PATENT ASSIGNEE(S):
 PCT Int. Appl., 767 pp.
SOURCE:
 CODEN: PIXXD2
DOCUMENT TYPE:
 Patent
LANGUAGE:
 English
FAMILY ACC. NUM. COUNT:
 36
PATENT INFORMATION:
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| PAT | PATENT NO.    |     | KI  | ND  | DATE | DATE |     |     | APPLICATION NO. |     |      |      |                 | DATE |       |     |
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| D.         |   |     |    |         |     |         |      |                     |      |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |
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| <b>5</b>   |   |     | 1  |         |     |         |      |                     |      |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |
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| Υ          |   |     |    |         |     |         |      |                     |      | ** * * <u>*</u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |
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| <b>1</b>   |   |     |    |         |     |         |      |                     |      |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |
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| <b>3</b> * |   |     |    |         |     |         |      |                     |      |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |
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| ,          |   |     |    | • 10-11 |     |         |      |                     |      | iv.             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |
| u.         |   |     |    |         | 2   |         | C-   | er<br>Para er er er | . 'e | 1.00            | A Company of the Comp |     |

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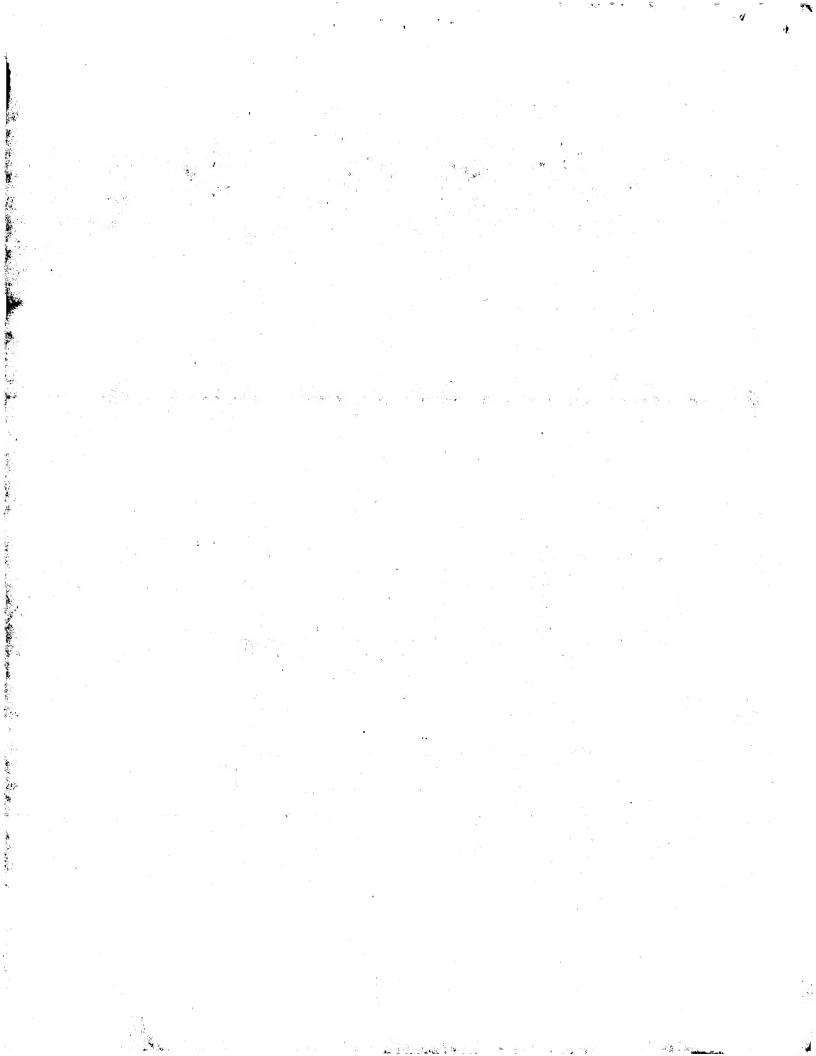
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,

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CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
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 MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
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PRIORITY APPLN. INFO.:
 US 2001-323469P
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 US 2001-323887P
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 US 2001-350666P
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 US 2002-355145P
 20020208
 US 2002-355257P
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 US 2002-372246P
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 20020412
 WO 2002-US29560
 Α
 20020917
 Described herein are genes whose expression are up-regulated or
ΑB
 down-regulated in specific cancers, including acute lymphocytic
 leukemia, glioblastoma, glioblastoma multiforme, glioma, kidney
 cancer, stomach cancer, melanoma, and benign NEVI. Mol. profiles of
 various normal and cancerous tissues were detd. and analyzed using
 the Affymetrix/Eos Hu01 and Hu03 GeneChip microarrays contg. 35,403
 and 59,680 probe sets, resp. Related methods and compns. that can
 be used for diagnosis and treatment of those cancers are disclosed.
 Also described herein are methods that can be used to identify
 modulators of selected cancers.
IT
 503636-92-8
 RL: ANT (Analyte); DGN (Diagnostic use); PRP (Properties); THU
 (Therapeutic use); ANST (Analytical study); BIOL (Biological study);
 USES (Uses)
 (amino acid sequence; gene expression profiles useful in methods
 of diagnosis of cancer compns. and methods of screening
 for modulators of cancer)
 HCAPLUS COPYRIGHT 2003 ACS on STN
 ANSWER 3 OF 51
L4
 2003:197914 HCAPLUS
ACCESSION NUMBER:
 138:220360
DOCUMENT NUMBER:
 Generation of cytotoxic T-cells to tumor
TITLE:
 antigens
 Chaux, Pascal; Luiten, Rosalie; Demotte,
INVENTOR(S):
 Nathalie; Duffour, Marie-Therese; Lurquin,
 Christophe; Traversari, Catia; Stroobant,
 Vincent; Cornelis, Guy; Boon-Falleur, Thiery;
 Van Der Bruggen, Pierre
```

Searcher :

308-4994

Shears



PATENT ASSIGNEE(S): Ludwig Institute for Cancer Research, USA;

Universite Catholique De Louvain

SOURCE: U.S., 39 pp., Cont.-in-part of U.S. 6,407,063.

CODEN: USXXAM

DOCUMENT TYPE:

Patent English

2

LANGUAGE: FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO.                  | KIND       | DATE                      | APPLICATION NO.                  | DATE                 |
|-----------------------------|------------|---------------------------|----------------------------------|----------------------|
| US 6531451                  |            | 20030311                  | US 1999-289350<br>US 1998-165863 | 19990409<br>19981002 |
| US 6407063<br>WO 2000020445 | A2         | 20000413                  | WO 1999-IB1664                   | 19990915             |
| WO 2000020445               |            | 20000713<br>P, KR, NZ, US |                                  |                      |
| RW: AT, BE,                 | CH, CY     |                           | FI, FR, GB, GR, IE,              | IT, LU, MC,          |
| NL, PT,<br>AU 9959929       | SE<br>A1   | 20000426                  | AU 1999-59929                    | 19990915             |
| EP 1117679                  |            |                           | EP 1999-970091                   | 19990915             |
| R: AT, BE,<br>PT, IE,       |            | , DK, ES, FR,             | GB, GR, IT, LI, LU,              | NL, SE, MC,          |
| JP 2003518911               |            |                           |                                  | 19990915<br>19981002 |
| PRIORITY APPLN. INFO        | • <b>:</b> |                           |                                  | 19990409             |
|                             |            | 1                         | WO 1999-IB1664 W                 | 19990915             |

AB The authors disclose a method for generation of cytotoxic T lymphocyte (CTL) clones. These CTL comprise clones that have been isolated by successive steps of stimulation and testing with different antigen presenting cells; these cells utilize various expression systems (e.g., from recombinant Yersinia, recombinant Salmonella, or recombinant viruses) for presentation of cognate antigen by HLA class I complexes. In particular, the present invention relates to isolated CTL clones that are specific for MAGE-1 and MAGE-4.

IT 162558-08-9

RL: PRP (Properties)

(unclaimed sequence; generation of cytotoxic T-cells to

tumor antigens)

REFERENCE COUNT:

19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

2003:91924 HCAPLUS

DOCUMENT NUMBER:

138:185978

TITLE:

Priming of T cells with Ad-transduced DC followed by expansion with peptide-pulsed DC significantly enhances the induction of

tumor-specific CD8+ T cells: implications for an

efficient vaccination strategy

AUTHOR(S):

Tuettenberg, A.; Jonuleit, H.; Tueting, T.;

Brueck, J.; Knop, J.; Enk, A. H.

CORPORATE SOURCE:

Dep. Dermatol., J.-Gutenberg Univ., Mainz,

Germany

SOURCE:

Gene Therapy (2003), 10(3), 243-250

CODEN: GETHEC; ISSN: 0969-7128

PUBLISHER:

Nature Publishing Group

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DOCUMENT TYPE: Journal LANGUAGE: English

In recent years, vaccination strategies using antigen-presenting AB cells (APC) have been under investigation. Antigen delivery using genetic immunization through ex vivo transduction of dendritic cells (DC) is supposed to enhance the induction of antitumor responses in humans by activating a broad range of peptide-specific CD8+ T cells. In this study, we compared the potential of adenoviral (Ad)-transduced vs. peptide-pulsed DC to induce melanoma-antigen (Ag)-specific T-cell responses in vitro. Whereas gp100-peptide-pulsed DC induced long-lasting specific CD8+ T-cell. responses against single peptides, Ad-transduced DC induced broad and strong, specific immunity against various peptides of the gp100-Ag. Surprisingly, several restimulations led to decreasing qp100-specific and in parallel to increasing anti-adenoviral T-cell responses. Nevertheless, those anti-adenoviral T-cell responses provided an adjuvant' effect by inducing an early release of high amts. of IL-2/IFN-.gamma., therewith enhancing CTL induction in the initiation phase. Based on these data, we suggest a prime/boost vaccination strategy in melanoma patients - combining the use of Ad-DC and peptide-pulsed DC - to obtain efficient and long-term antitumor T-cell responses.

IT 162558-08-9

RL: BSU (Biological study; unclassified); BIOL (Biological study) (priming of T cells with Adenovirus-transduced DC followed by expansion with peptide-pulsed DC significantly enhances the induction of tumor-specific CD8+ T cells in vaccine)

REFERENCE COUNT:

THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

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ACCESSION NUMBER:

2003:76882 HCAPLUS

DOCUMENT NUMBER:

138:135820

TITLE:

Epitope sequences derived from tumor-associated

antigens for use in diagnosis and vaccines Simard, John J. L.; Diamond, David C.; Liu,

INVENTOR(S):

Liping; Xie, Zhidong

PATENT ASSIGNEE(S):

CTL Immunotherapies Corp., USA

SOURCE:

PCT Int. Appl., 239 pp.

DOCUMENT TYPE:

CODEN: PIXXD2
Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO.                  | KIND | DATE     | APPLICATION NO.   | DATE     |
|-----------------------------|------|----------|-------------------|----------|
| WO 2003008537               | A2   | 20030130 | WO 2002-US10189   | 20020329 |
| W: AU PRIORITY APPLN. INFO. | :    |          | US 2001-282211P P | 20010406 |

US 2001-337017P P 20011107 US 2002-363210P P 20020307

AB The present invention provides epitopes that have a high affinity for MHC class I, and that correspond to the processing specificity of the housekeeping proteasome, which is active in peripheral cells. These epitopes thus correspond to those presented on target cells, and are derived from tumor-assocd. antigens such as tyrosinase,

|             |        |              | · · · · · · · · · · · · · · · · · · ·       | ैं <del>कि</del> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | i 👼 |        | q | ,   |
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|             |        |              | e e e e e e e e e e e e e e e e e e e       |                  | 76                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     |        |   |     |
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| 9/4         |        |              |                                             |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |        | • |     |
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|             |        | ·(Y)         |                                             | · · ·            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |        |   |     |
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|             |        |              |                                             |                  | 4*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     |        |   |     |
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| -1,         |        |              |                                             |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |        |   |     |
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SSX-2, PMSA (prostate-specific membrane antigen), GP100, MAGE-1, MAGE-2, MAGE-3, NY-ESO-1, PRAME (also known as MAPE, DAGE, and OIP4), PSA (prostate-specific antigen), and PSCA (prostate stem cell antigen). The use of such epitopes in vaccines can activate the cellular immune response to recognize the correctly processed tumor-assocd. antigen and can result in removal of target cells that present such epitopes. The housekeeping epitopes provided can be used in combination with immune epitopes, generating a cellular immune response that is competent to attack target cells both before and after interferon induction. The epitopes are also useful in diagnosis and monitoring of the target-assocd. disease and in the generation of immunol. reagents for such purposes. Disclosed herein are polypeptides, including epitopes, clusters, and antigens.

ΙT **481197-02-8**, GenBank AAB19181

> RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (amino acid sequence; epitope sequences derived from tumor-assocd. antigens for use in diagnosis and vaccines)

ANSWER 6 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

2002:795492 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 137:309110

TITLE: Modification of a tumor-derived peptide at an

HLA-A2 anchor residue can alter the conformation

of the MHC-peptide complex: probing with

TCR-like recombinant antibodies

AUTHOR(S): Denkberg, Galit; Klechevsky, Eynav; Reiter,

Yoram

Faculty of Biology, Technion-Israel Institute of Technology, Haifa, 32000, Israel CORPORATE SOURCE:

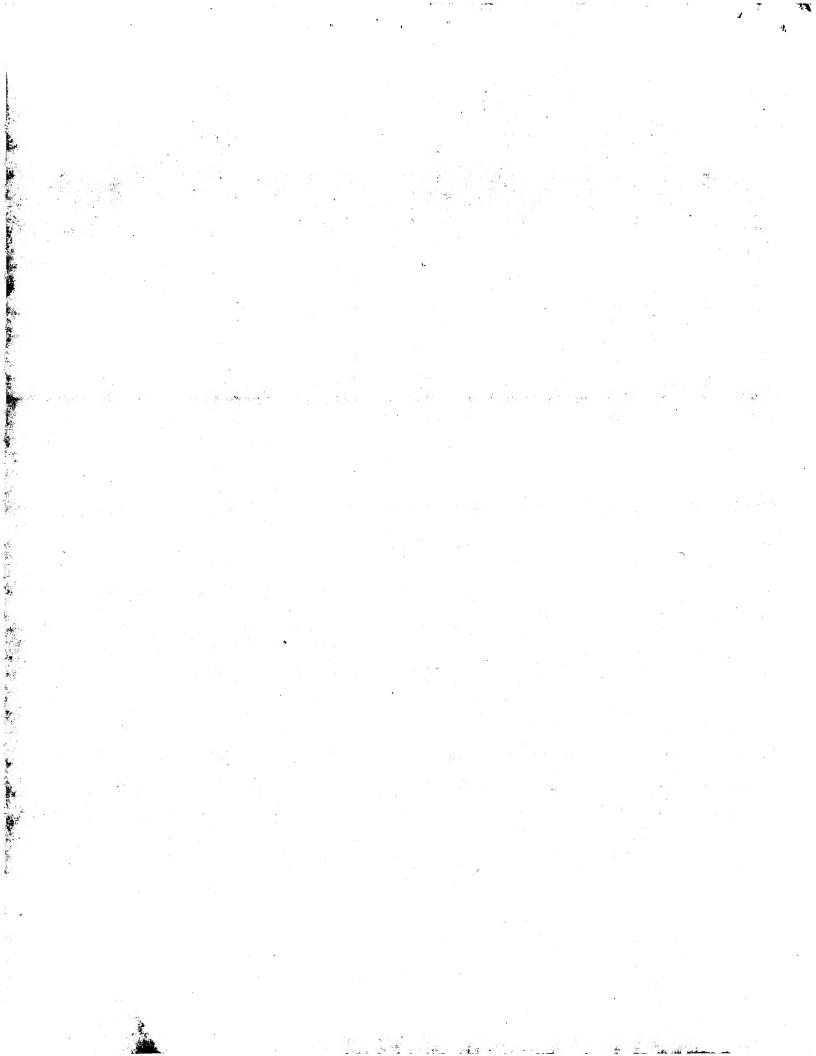
Journal of Immunology (2002), 169(8), 4399-4407 SOURCE:

CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

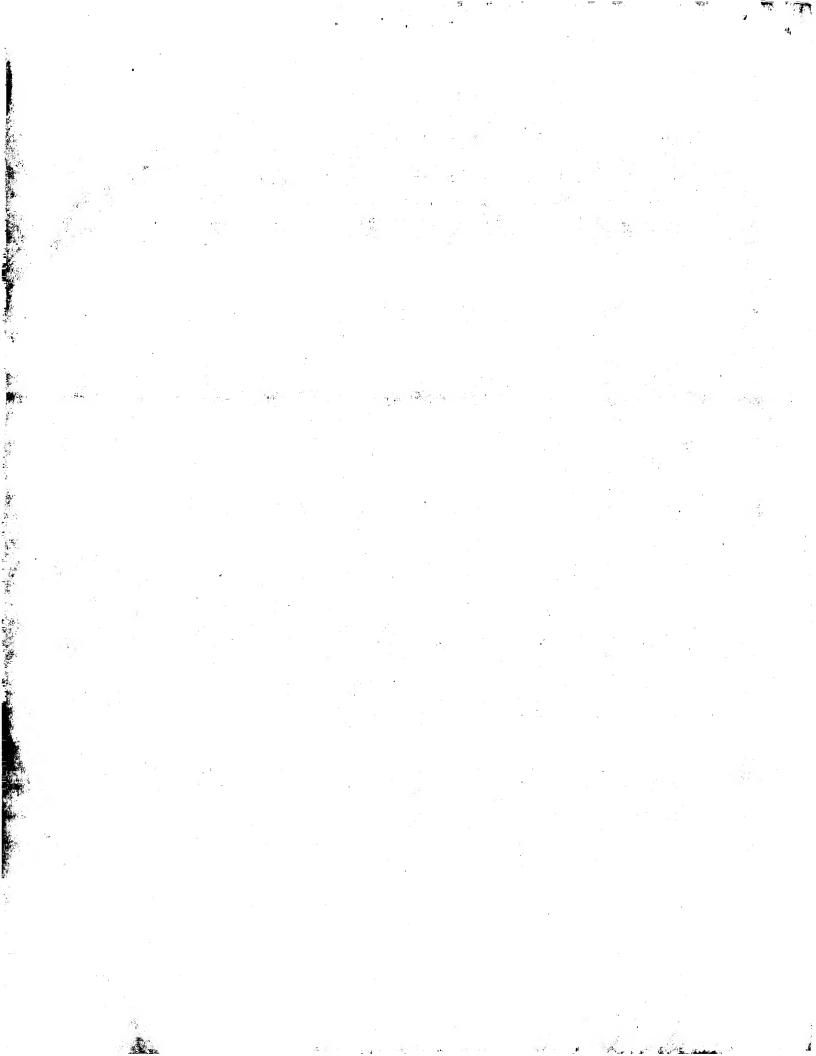
DOCUMENT TYPE: Journal LANGUAGE: English

A common assumption about peptide binding to the class I MHC complex is that each residue in the peptide binds independently. Based on this assumption, modifications in class I MHC anchor positions were used to improve the binding properties of low-affinity peptides (termed altered peptide ligands), esp. in the case when tumor-assocd. peptides are used for immunotherapy. Using a new mol. tool in the form of recombinant Abs endowed with Ag-specific MHC-restricted specificity of T cells, the authors show that changes in the identity of anchor residues may have significant effects, such as altering the conformation of the peptide-MHC complex, and as a consequence, may affect the TCR-contacting residues. The authors herein demonstrate that the binding of TCR-like recombinant Abs, specific for the melanoma differentiation Ag T cell epitope G9-209, is entirely dependent on the identity of a single peptide anchor residue at position 2. An example is shown in which TCR-like Abs can recognize the specific complex only when a modified peptide, G9-209-2 M, with improved affinity to HLA-A2 was used, but not with the unmodified natural peptide. Importantly, these results demonstrate, using a novel mol. tool, that modifications at anchor residues can dramatically influence the conformation of the MHC peptide groove and thus may have a profound effect on TCR interactions. Moreover, these results may have important implications in designing modifications in peptides for cancer



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immunotherapy, because most such peptides studied are of low
 affinity.
ΙT
 162558-08-9
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (modification of a tumor-derived peptide at HLA-A2
 anchor residue can alter conformation of MHC-peptide complex)
REFERENCE COUNT:
 55
 THERE ARE 55 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT
 ANSWER 7 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN
L4
ACCESSION NUMBER:
 2002:793764 HCAPLUS
 137:309478
DOCUMENT NUMBER:
 anticancer vaccines comprising epitopes of tumor
TITLE:
 or neovasculature antigen
INVENTOR(S):
 Simard, John J. L.; Diamond, David C.; Liu,
 Liping; Xie, Zhidong
PATENT ASSIGNEE(S):
 CTL Immunotherapies Corp., USA; Mannkind
 Corporation
 PCT Int. Appl., 352 pp.
SOURCE:
 CODEN: PIXXD2
DOCUMENT TYPE:
 Patent
LANGUAGE:
 English
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
 APPLICATION NO.
 DATE
 PATENT NO.
 KIND DATE

 WO 2002-US11101 20020404
 WO 2002081646
 A2
 20021017
 WO 2002081646
 A3
 20030717
 AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
 CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DM, DZ, EC, EE, EE,
 ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
 KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE,
 SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN,
 YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,
 SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG
PRIORITY APPLN. INFO.:
 US 2001-282211P P
 20010406
 US 2001-337017P P
 20011107
 US 2002-363210P P 20020307
 Disclosed herein are polypeptides, including epitopes, clusters, and
AΒ
 antigens. Also disclosed are compns. that include said polypeptides
 and methods for their use for cancer diagnosis and therapy.
ΙT
 471943-16-5, Protein (human gene pmel17)
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
 (Properties); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (amino acid sequence; anticancer vaccines comprising
 epitopes of tumor or neovasculature antigen)
 ANSWER 8 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN
L4
 2002:657918 HCAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
 137:200246
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T lymphocytes for cancer therapy

TITLE:

Preparation of tumor antigen-specific cytotoxic

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Degraw, Juli; Moriarty, Ann; Leturcq, Didier J.;
INVENTOR(S):
 Jackson, Michael R.; Peterson, Per A.; Heiskala,
 Marja
 Ortho-McNeil Pharmaceutical, Inc., USA
PATENT ASSIGNEE(S):
 PCT Int. Appl., 99 pp.
SOURCE:
 CODEN: PIXXD2
 Patent
DOCUMENT TYPE:
 English
LANGUAGE:
FAMILY ACC. NUM. COUNT:
 1
PATENT INFORMATION:
 KIND
 DATE
 APPLICATION NO.
 DATE
 PATENT NO.

 20020829
 WO 2002-US5748
 20020219
 WO 2002065992
 A2
 A3
 WO 2002065992
 20030213
 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
 NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
 TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
 MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
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 SN, TD, TG
 20030424
 US 2002-80013
 20020219
 US 2003077248
 A1
 US 2001-270252P P 20010220
PRIORITY APPLN. INFO.:
 T cell responses are often diminished in humans with a compromised
 immune system. We have developed a method to isolate, stimulate and
 expand naive cytotoxic T lymphocyte precursors (CTLp) to
 antigen-specific effectors, capable of lysing tumor cells in vivo.
 This ex vivo protocol produces fully functional effectors.
 Artificial antigen presenting cells (AAPCs; Drosophila melanogaster)
 transfected with human HLA class I and defined accessory mols., are
 used to stimulate CD8+ T cells from both normal donors and cancer
 patients. The class I mols. expressed to a high d. on the surface
 of the Drosophila cells are empty, allowing for efficient loading of
 multiple peptides that results in the generation of polyclonal
 responses recognizing tumor cells endogenously expressing the
 specific peptides. The responses generated are robust,
 antigen-specific and reproducible if the peptide epitope is a
 defined immunogen. This artificial antigen expression system can be
 adapted to treat most cancers in a significant majority of the
 population.
IΤ
 162558-08-9
 RL: BSU (Biological study, unclassified); PRP (Properties); THU
 (Therapeutic use); BIOL (Biological study); USES (Uses)
 (prepn. of tumor antigen-specific cytotoxic T
 lymphocytes for cancer therapy)
 ANSWER 9 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN
L4
 2002:536421 HCAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
 137:114479
 Pharmaceutical compositions for treating or
TITLE:
 preventing cancer, especially melanoma
 Searcher :
 Shears
 308-4994
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Moelling, Karin; Nawrath, Michael; Pavlovic, INVENTOR(S):

Jovan

Universitaet Zuerich Institut Fuer Medizinische PATENT ASSIGNEE(S):

Virologie, Switz.

Eur. Pat. Appl., 34 pp. SOURCE:

CODEN: EPXXDW

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO

|      | PATENT                        |        | KIN   | ND.         | DATE  |       | APPLICATION NO. |       |       |       |       |       | DATE |                |       |            |  |  |
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|      | US 2002                       | 21775  | 47    | A1          | Ĺ     | 2002  | 1128            |       | US    | 5 20  | 02-4  | 7539  |      | 2002           | 0115  |            |  |  |
| PRIO | RITY API                      | PLN.   | INFO  | . :         |       |       |                 | . ]   | EP 20 | 001-  | 1009  | 14    | Α    | 2001           | 0116  |            |  |  |
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ΙT 162558-08-9

> RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmaceutical compns. for treating or preventing cancer

, esp. **melanoma**)

IT 442701-70-4

RL: PRP (Properties)

(unclaimed protein sequence; pharmaceutical compns. for treating or preventing cancer, esp. melanoma)

ANSWER 10 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

2002:416216 HCAPLUS

DOCUMENT NUMBER:

138:23273

TITLE:

Induction of HLA-A2-restricted CTL responses by

a tubular structure carrying human melanoma

epitopes

AUTHOR(S):

Ghosh, Mrinal K.; Li, Cui-Ling; Fayolle, Catherine; Dadaglio, Gilles; Murphy, Aileen; Lemonnier, Francois A.; Roy, Polly; Leclerc,

Claude

CORPORATE SOURCE:

School of Medicine, Department of Medicine, Division of Geographic Medicine, University of Alabama at Birmingham, Birmingham, AL, 35924,

USA

SOURCE:

Vaccine (2002), 20(19-20), 2463-2473

CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER:

Elsevier Science Ltd.

DOCUMENT TYPE:

Journal

English LANGUAGE:

Epitope-based vaccination strategies designed to induce strong tumor-specific CD8+ T cell responses are being widely considered for cancer immunotherapy. Here, two recombinant tubular structures,

> Searcher : 308-4994 Shears

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NS1-Mela 1 and NS1-Mela 2, carrying, resp. two HLA-A2 epitopes derived from human melanoma antigens were constructed and their capability to induce CTL responses in vivo were studied in HLA-A2 transgenic mice. Strong CTL responses specific for GnT-V/NA 17-A and gp100 (154-162) epitopes were generated in HLA-A2 transgenic mice immunized by the construct NS1-Mela 1 carrying these two epitopes. The second construct NS1-Mela 2 carrying both Tyrosinase (369-377 Da) and Melan-A/Mart-1 (27-35) epitopes induced a weak Tyrosinase-specific CTL response in mice but failed to induce specific CTL responses against the Melan-A/Mart-1 (27-35) epitope in the tested mice. Thus, recombinant tubular structures contg. multiple tumoral epitopes may lead to new strategies for the induction of strong tumor-specific CTL responses in cancer patients. 162558-08-9

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (induction of HLA-A2-restricted CTL responses by a tubular structure carrying human melanoma epitopes)

REFERENCE COUNT:

THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

2002:353300 HCAPLUS

DOCUMENT NUMBER:

INVENTOR(S):

136:368444

TITLE:

IT

Polynucleotides expressing fusion protein of human .beta.2 microglobulin and cancer or

non-cancer epitopes for cancer therapy
Tafuro, Sabrina; Meier, Ute-Christiane;
Memiabaal Andrew Israel Ball John Irwin

McMichael, Andrew James; Bell, John Irving;

Layton, Guy; Hunter, Michael

PATENT ASSIGNEE(S):

SOURCE:

Isis Innovation Limited, UK

PCT Int. Appl., 46 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

LANGUAGE:

Patent English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

|       | PATENT NO. |       |      |      | KI                         | ND  | DATE |                        | •   | APPLICATION NO. |      |      | 0.   | DATE |      |      |     |
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|       |            |       |      |      | A2 20020510<br>A3 20021017 |     |      | WO 2001-GB4844         |     |                 | 4    | 2001 |      |      |      |      |     |
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|       |            |       | NO,  | NZ,  | OM,                        | PH, | PL,  | PΤ,                    | RO, | RU,             | SD,  | SE,  | SG,  | SI,  | SK,  | SL,  | ТJ, |
|       |            |       | TM,  | TR,  | TT,                        | TZ, | UA,  | UG,                    | US, | UZ,             | VN,  | YU,  | ZA,  | ZW,  | AM,  | ΑZ,  | BY, |
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|       |            |       | TR,  | BF,  | ВJ,                        | CF, | CG,  | CI,                    | CM, | GΑ,             | GN,  | GQ,  | GW,  | ML,  | MR,  | NE,  | SN, |
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|       | ΑU         | 20020 | 0124 | 72   | · A                        | 5   | 2002 | 0515                   |     | A               | U 20 | 02-1 | 2472 |      | 2001 | 1101 |     |
|       | ΕP         | 13302 | 259  |      | A.                         | 2   | 2003 | 0730                   |     | E               | P 20 | 01-9 | 8067 | 9    | 2001 | 1101 |     |
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WO 2001-GB4844 W 20011101

The present invention relates to polynucleotides for use in cancer therapy. In particular, the invention provides a polynucleotide capable of expressing an epitope-.beta.2m fusion protein; for use in the generation of cytotoxic T lymphocyte (CTL) responses against a tumor; and a polynucleotide capable of expressing an epitope-.beta.2m fusion protein; for use in a method of restoring antigen presentation in the tumor of a host. The epitope is derived from latent membrane protein, EBNA-3C antigen, BZLF1 or BMLF1 of Epstein-Barr virus; lower matrix protein pp65 of cytomegalovirus; nucleoprotein or matrix protein of influenza; and tumor antigens of human.

# IT 162558-08-9

AUTHOR (S):

RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(polynucleotides expressing fusion protein of human .beta.2 microglobulin and cancer or non-cancer epitopes for cancer therapy)

L4 ANSWER 12 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:51038 HCAPLUS

DOCUMENT NUMBER: 137:45640

TITLE: Human dendritic cells genetically engineered to

express a melanoma polyepitope.DNA vaccine induce multiple cytotoxic T-cell responses Smith, Steven Gerard; Patel, Poulam Manubhai;

Porte, Joanne; Selby, Peter John; Jackson,

Andrew Mark

CORPORATE SOURCE: Applied Immunology Group, St. James's University

Hospital, Leeds, LS9 7TF, UK

SOURCE: Clinical Cancer Research (2001), 7(12),

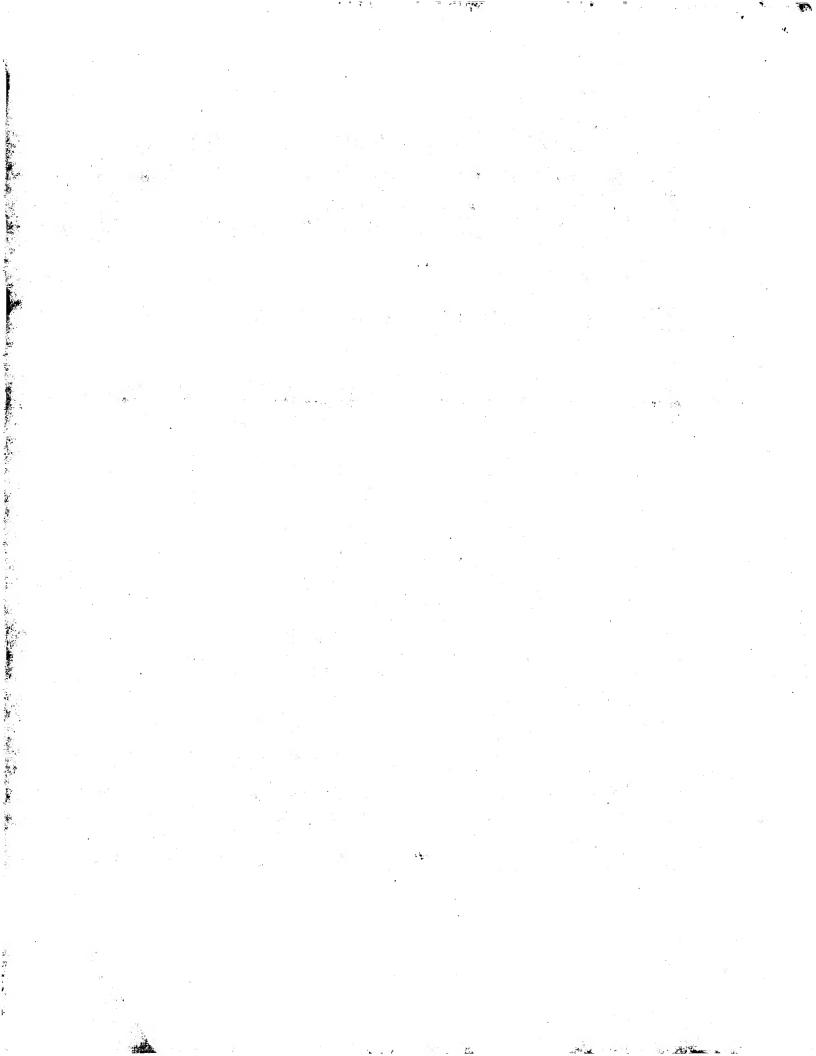
4253-4261

CODEN: CCREF4; ISSN: 1078-0432

PUBLISHER: American Association for Cancer Research

DOCUMENT TYPE: Journal LANGUAGE: English

Purpose: To assess the therapeutic potential of a melanoma polyepitope vaccine in human cells. Polyepitope DNA vaccines encoding T-cell epitopes have been demonstrated in murine systems to generate multiple cytotoxic T-cell responses to different antigens. Here, for the first time the authors demonstrate the ability of a melanoma polyepitope to stimulate lymphocytes from normal human donors to simultaneously generate multiple antigen-specific responses. Exptl. Design: Human dendritic cells (DC), transduced with a melanoma-polyepitope cDNA, were used to activate autologous lymphocytes from naive donors as an in vitro model of DNA vaccination. Lymphocytes were primed with polyepitope or mock-transduced DC, boosted with peptide, then measured for antigen-specific cytotoxicity. Results: Lymphocytes primed with polyepitope-transduced DC and boosted with peptide generated multiple cytotoxic responses. By contrast lymphocytes primed with mock-transfected DCs and boosted with peptide gave no specific cytotoxicity. However, when lymphocytes were repeatedly stimulated with polyepitope-transduced DCs immunodominance was seen with CTLs being generated to only one epitope, MART27-35. Conclusions: the authors show in a human system that a melanoma polyepitope primes CTL to multiple epitopes. However, repeated stimulation by the polyepitope restricts the response to only the MART1 epitope. Thus,



although polyepitope vaccines are an effective way of priming multiple naive T-cell responses, continual boosting with polyepitope vaccines may, as a result of immunodominance, restrict the CTL. These findings have important implications for the use of DNA polyepitope vaccines in cancer immunotherapy.

162558-08-9P ΙT

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(human dendritic cells genetically engineered to express a melanoma polyepitope induce multiple cytotoxic T-cell responses)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

HCAPLUS COPYRIGHT 2003 ACS on STN ANSWER 13 OF 51 L4

ACCESSION NUMBER:

2001:886174 HCAPLUS

DOCUMENT NUMBER:

136:31665

TITLE:

SOURCE:

Therapeutic anti-melanoma compounds

INVENTOR(S):

Nicolette, Charles A. Genzyme Corp., USA

PATENT ASSIGNEE(S):

PCT Int. Appl., 69 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent English

LANGUAGE:

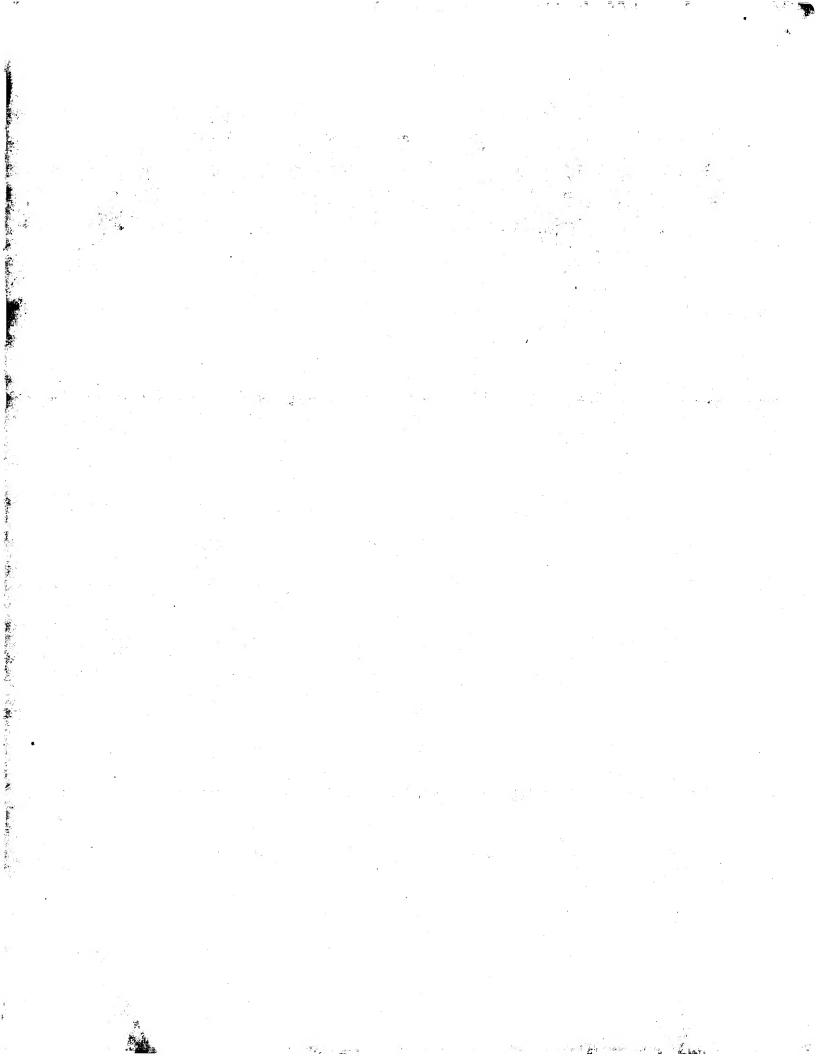
FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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APPLICATION NO.
 DATE
 PATENT NO.
 KIND
 DATE

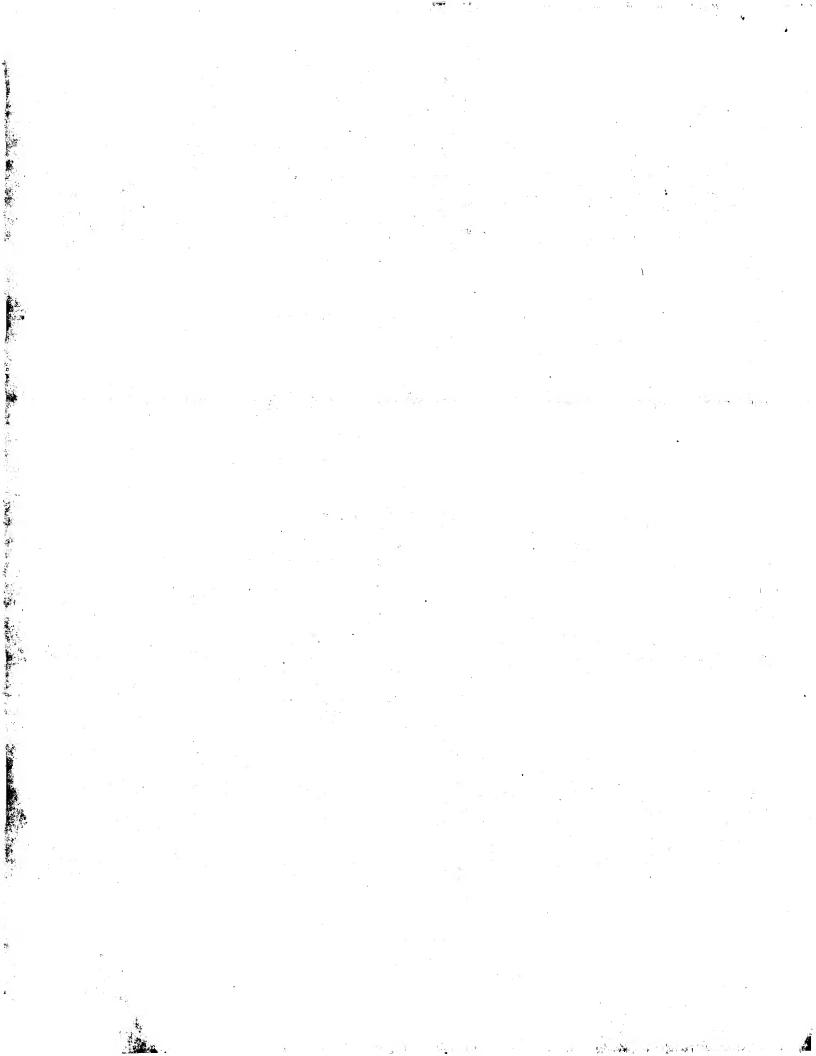
 WO 2001092294
 A2
 20011206
 WO 2001-US16417
 20010521
 WO 2001092294
 A3
 20020613
 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
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 MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,
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 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD,
 TG
 US 2002082217
 A1 _20020627
 US 2001-862260
 20010521
 A2 20030226
 EP 2001-939224
 20010521
 EP 1284996
 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.:
 US 2000-208955P
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 20000531
 US 2001-267877P
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 20010209
 WO 2001-US16417
 W
 20010521
AΒ
 The present invention provides synthetic compds., antibodies that
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recognize and bind to these compds., polynucleotides that encode these compds., and immune effector cells raised in response to presentation of these epitopes. The invention further provides methods for inducing an immune response and administering immunotherapy to a subject by delivering the compn. of the invention.



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ΙT
 155422-80-3
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (amino acid sequence; therapeutic anti-melanoma
 compds.)
 ANSWER 14 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN
L4
 2001:780623 HCAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
 135:343268
 Methods and compositions for heat shock protein
TITLE:
 mediated immunotherapy of melanoma
INVENTOR(S):
 Houghton, Alan; Livingston, Philip; Al-Awqati,
 Qais; Mayhew, Mark; Hoe, Mee
 USA
PATENT ASSIGNEE(S):
 PCT Int. Appl., 150 pp.
SOURCE:
 CODEN: PIXXD2
DOCUMENT TYPE:
 Patent
LANGUAGE:
 English
FAMILY ACC. NUM. COUNT:
 3
PATENT INFORMATION:
 PATENT NO.
 KIND DATE
 APPLICATION NO.
 DATE

 WO 2001078655
 WO 2001-US12449
 A2
 20011025
 20010417
 А3
 20020314
 WO 2001078655
 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE,
 GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO,
 NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
 TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,
 RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD,
 TG
 AU 2001-57072
 AU 2001057072
 Α5
 20011030
 20010417
 US 2000-197462P P
PRIORITY APPLN. INFO.:
 20000417
 WO 2001-US12449 W
 20010417
 The present invention relates to immunotherapeutic compns.
AB
 comprising an effective amt. of a mol. chaperone such as a heat
 shock protein, preferably hsp70, non-covalently bound to one or more
 javelinized melanoma antigens and to methods of using the
 immunotherapeutic compns. to induce an immune response against
 melanoma in a subject. The immunotherapeutic compn. may contain one
 or more heat shock proteins, such as one or more of hsp70, hsp90,
 gp96, BiP, and hsp40, and may contain one or more javelinized
 melanoma antigens.
 162558-08-9 370891-72-8 370891-73-9
IT
 370891-74-0 370891-75-1 370891-76-2
 370891-77-3 370891-78-4 370891-79-5
 371771-64-1 371771-65-2 371772-22-4
 371772-23-5 371772-24-6 371772-37-1
 371772-38-2 371772-39-3 371772-40-6
 371772-41-7 371772-42-8 371772-43-9
 RL: BSU (Biological study, unclassified); PRP (Properties); THU
 (Therapeutic use); BIOL (Biological study); USES (Uses)
 (heat shock protein and melanoma antigen for
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#### immunotherapy of melanoma)

L4 ANSWER 15 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:713374 HCAPLUS

DOCUMENT NUMBER: 135:267217

TITLE: Synthetic antigenic peptide sequences for gp100

positive melanoma and uses for cancer vaccines

INVENTOR(S): Nicolette, Charles A.
PATENT ASSIGNEE(S): Genzyme Corporation, USA

SOURCE: PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PAT  | TENT | NO.  |      | KI     | ND  | DATE |      | ٠   | AI    | PLI  | CATI | ON NO | ٥.  | DATE |      |     |
|------|------|------|------|--------|-----|------|------|-----|-------|------|------|-------|-----|------|------|-----|
| WO   | 2001 | 0707 | 67   | <br>A: | 2   | 2001 | 0927 | ,   | WC    | 20   | 01-U | S891  | 9   | 2001 | 0319 |     |
| WO   | 2001 | 0707 | 67   | A      | 3   | 2002 | 0124 |     |       |      |      |       |     |      |      |     |
|      | W:   | ΑU,  | CA,  | JP     |     |      |      |     |       |      |      |       |     |      |      | •   |
|      | RW:  | ΑT,  | BE,  | CH,    | CY, | DE,  | DK,  | ES, | FI,   | FR,  | GB,  | GR,   | ΙĒ, | IT,  | LU,  | MC, |
|      |      | NL,  | PT,  | SE,    | TR  |      |      |     |       |      |      |       |     |      |      |     |
| US   | 2002 | 1691 | 32   | Α      | 1   | 2002 | 1114 |     | US    | 3 20 | 01-8 | 1223  | 8   | 2001 | 0319 |     |
| EP   | 1268 | 542  |      | A.     | 2   | 2003 | 0102 |     | ΕI    | 20   | 01-9 | 5992  | 2   | 2001 | 0319 |     |
|      | R:   | AT,  | BE,  | CH,    | DE, | DK,  | ES,  | FR, | GB,   | GR,  | ΙT,  | LI,   | LU, | NL,  | SE,  | MC, |
|      |      | PT,  | ΙE,  | FI,    | CY, | TR   |      |     |       |      |      |       |     |      |      |     |
| RITY | APP  | LN.  | INFO | . :    |     |      |      |     | US 20 | 000- | 1907 | 50P   | Р   | 2000 | 0320 |     |

PRIORITY APPLN. INFO.:

US 2000-190750P P 20000320

US 2000-255019P P 20001212

WO 2001-US8919 W 20010319

The present invention provides synthetic compds., antibodies that recognize and bind to these compds., polynucleotides that encode these compds., and immune effector cells raised in response to presentation of these epitopes. In particular, this invention provides novel, synthetic antigenic peptide sequences, which are useful as components of anti-cancer vaccines and to expand immune effector cells that are specific for cancers characterized by expression of the melanoma antigen gp100. The invention further provides methods for inducing an immune response and administering immunotherapy to a subject by delivering the compns. of the invention. In one embodiment, the altered ligands of the invention have comparable affinity for MHC binding as the native ligand.

IT 155422-80-3

RL: PRP (Properties)

(unclaimed protein sequence; synthetic antigenic peptide sequences for gp100 pos. melanoma and uses for cancer vaccines)

L4 ANSWER 16 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:544451 HCAPLUS

DOCUMENT NUMBER: 135:240560

TITLE: Detection and quantification of CD8+ T cells

specific for HLA-A\*0201-binding melanoma and viral peptides by the IFN-.gamma.-ELISPOT assay

AUTHOR(S): Griffioen, Marieke; Borghi, Martina; Schrier,

Peter I.; Osanto, Susanne

CORPORATE SOURCE: Department of Clinical Oncology, Leiden

University Medical Center, Leiden, 2300 RC,

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Neth.

SOURCE: International Journal of Cancer (2001), 93(4),

549-555

CODEN: IJCNAW; ISSN: 0020-7136

PUBLISHER: Wiley-Liss, Inc.

DOCUMENT TYPE: Journal LANGUAGE: English

Blood lymphocytes from HLA-A\*0201-subtyped melanoma patients and healthy controls were screened for the presence of T cells specific for HLA-A\*0201-binding melanoma and viral peptide antigens by the enzyme-linked immunoSPOT (ELISPOT) assay. CD8+ cells were tested for peptide-specific IFN-.gamma. release immediately after selection as well as after 2 wk of in vitro stimulation. After in vitro stimulation, CD8+ T cells specific for influenza were measured in all patients and controls, whereas these T cells could be detected among nonstimulated CD8+ cells in only 52% of individuals. Similarly, T cells specific for EBV were more frequently measured among in vitro-stimulated than nonstimulated CD8+ cells. In nonstimulated CD8+ cells, T cells specific for MART-1/Melan-A, gp100, tyrosinase and CAMEL were present in 4 (33%), 1 (8%), 1 (8%) and 3 (25%) of 12 patients, resp. Only MART-1/Melan-A-specific CD8+ T cells were found in 1 (11%) of 9 healthy controls. CD8+ T cells specific for MAGE-2 were not obsd. After in vitro stimulation, CD8+ T cells specific for MART-1/Melan-A could be demonstrated in 6 (46%) of 13 patients and 2 (20%) of 10 controls. CD8+ T cells specific for gp100 were detected in 1 patient after in vitro stimulation. No CD8+ T cells specific for tyrosinase, MAGE-2 or CAMEL could be measured after in vitro stimulation. These data show that the ELISPOT assay allows direct ex vivo detection of CD8+ T cells specific for viral and melanoma antigens. Furthermore, the data show that the sensitivity of the ELISPOT assay to measure influenzaand EBV-specific CD8+ T cells can be enhanced by a short in vitro stimulation step, whereas opposing effects on nos. of CD8+ T cells specific for melanoma antigens have been obsd.

IT 162558-08-9P

RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(detection and quantification of CD8+ T cells specific for HLA-A\*0201-binding melanoma and viral peptides by the IFN-.gamma.-ELISPOT assay)

REFERENCE COUNT:

THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

42

ACCESSION NUMBER:

2001:427335 HCAPLUS

DOCUMENT NUMBER:

135:32376

TITLE:

DNA and protein sequence of tumor associated antigen gene 3.8 and its therapeutic and

diagnostic uses

INVENTOR(S):

Martelange, Valerie; De Smet, Charles;

Boon-Falleur, Thierry

PATENT ASSIGNEE(S):

Ludwig Institute for Cancer Research, USA

SOURCE:

U.S., 34 pp., Cont.-in-part of U.S. Ser. No.

122,989, abandoned.

CODEN: USXXAM

DOCUMENT TYPE:

Patent

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LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| 1      | PAI | ENT I          | NO.   |            | KII  | ND  | DATE |      |     |    | APP | LICA | TIC  | N NC         | ) <b>.</b> . | DATE         |      |     |
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|        |     | 6245!<br>99530 |       |            |      |     |      |      |     |    |     |      |      | 3706<br>8163 |              | 1998<br>1999 |      |     |
| Ţ      | OW  | 99530<br>W:    | AU,   | CA,        | CN,  | JP, | KR,  | NZ,  |     |    |     |      |      |              |              |              |      |     |
|        |     | RW:            |       | BE,<br>PT, |      | CY, | DE,  | DK,  | ES, | FΙ | , F | R, G | SB,  | GR,          | IE,          | IT,          | LU,  | MC, |
| 1      | UA  | 99356          | 603   |            | A.   | 1   | 1999 | 1101 |     |    | AU. | 1999 | -35  | 603          |              | 1999         | 0414 |     |
| I      | EΡ  | 1073           | 734   |            | A.   | 2   | 2001 | 0207 |     |    | EΡ  | 1999 | 9-91 | 7493         | 3            | 1999         | 0414 |     |
|        |     | R:             | AT,   | BE,        | CH,  | DE, | DK,  | ES,  | FR, | GB | , G | R, I | Τ,   | LI,          | LU,          | NL,          | SE,  | MC, |
|        |     |                | PT,   | IE,        | FI   |     |      |      |     |    |     |      |      |              |              |              |      |     |
|        | JΡ  | 20025          | 51126 | 66         | T    | 2   | 2002 | 0416 |     |    | JΡ  | 2000 | -54  | 3609         | 9            | 1999         | 0414 |     |
| Ţ      | US  | 63037          | 756   |            | B    | 1   | 2001 | 1016 |     |    | US  | 2000 | -56  | 7995         | 5            | 2000         | 0510 |     |
| Ţ      | US  | 2002           | 11514 | 12         | A.   | 1   | 2002 | 0822 |     |    | US  | 2001 | 92   | 3831         | L            | 2001         | 0807 |     |
| PRIOR: | ITY | APPI           | LN.   | INFO       | . :  |     |      |      | Ţ   | US | 199 | 8-12 | 2298 | 19           | В2           | 1998         | 0727 |     |
|        |     |                |       |            |      |     |      |      | Ţ   | US | 199 | 8-60 | 706  | 5            | Α            | 1998         | 0415 |     |
|        |     |                |       |            |      |     |      |      | Ţ   | US | 199 | 8-18 | 370  | 6            | Α            | 1998         | 1030 |     |
|        |     |                |       |            |      |     |      |      | Ţ   | US | 199 | 8-18 | 378  | 19           | Α            | 1998         | 1030 |     |
|        |     |                |       |            |      |     |      |      | 1   | OW | 199 | 9-US | 816  | 3            | W            | 1999         | 0414 |     |
|        |     |                |       |            |      |     |      |      | Ţ   | US | 200 | 0-56 | 799  | 5            | A3           | 2000         | 0510 |     |
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The invention provides the cDNA and deduced protein sequence of tumer assocd. gene sdp3.8 (HEGA) from human sarcoma cell line LB-23. The sdp3.8 gene is expressed in normal testis tissue and several tumoral cells. This invention also provides the the predicted HLA binding motifs in HAGE(sdp3.8) peptides and the gene bank search results of HAGE (sdp3.8) sequence homologs. Methods and products also are provided for diagnosing and treating conditions characterized by expression of a sdp3.8 gene product.

# IT 162558-08-9

RL: PRP (Properties)

(unclaimed sequence; dNA and protein sequence of tumor

assocd. antigen gene 3.8 and its therapeutic and diagnostic uses) REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L4 ANSWER 18 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:387198 HCAPLUS

DOCUMENT NUMBER: 136:100793

TITLE: Synergistic effect of a combined DNA and peptide

vaccine against gp100 in a malignant melanoma

mouse model

AUTHOR(S): Nawrath, Michael; Pavlovic, Jovan; Moelling,

Karın

CORPORATE SOURCE: Institute of Medical Virology, University of

Zurich, Zurich, 8028, Switz.

SOURCE: Journal of Molecular Medicine (Berlin, Germany)

(2001), 79(2-3), 133-142

CODEN: JMLME8; ISSN: 0946-2716

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal LANGUAGE: English

AB Vaccination against tumors relies on tumor-assocd. antigens, and has

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been quite successful with synthetic peptides used as immunogens. Gp100 is a human melanoma-assocd. antigen (hgp100) with a highly homologous mouse counterpart, pmel17/gp100 (mgp100), that is expressed in melanocytes and highly tumorigenic B16 melanoma cells. Since mgp100 is poorly immunogenic in mice, we used a xenoimmunization approach and vaccinated with the hgp100 immunogen. To that end, plasmid DNA encoding hgp100 was applied as a vaccine in combination with three synthetic peptides corresponding to putative cytotoxic T cell epitopes of hgp100. Immunization with DNA and peptide-pulsed spleen cells had a synergistic effect and provided significant protection against a challenge with poorly immunogenic B16-F0 malignant melanoma cells in the syngeneic C57BL/6 mouse Vaccination with either plasmid DNA or peptides alone delayed the onset of tumor formation, and reduced tumor growth 2-fold and 30-fold, resp. However, while all animals vaccinated with DNA encoding hgp100 or with peptides eventually developed tumors, 30% of the animals treated with both vaccines remained tumor free and survived for the entire observation period of 150 days. Depletion of T cell subsets revealed that the protective effect obsd. after vaccination with plasmid DNA was mediated by CD4+ and CD8+ T cells, while protection following vaccination with DNA encoding hgp100 in combination with peptides appears to depend on CD4+ T cells only. Furthermore, we could also demonstrate a therapeutic effect of the combined DNA/peptide regime. A single treatment cycle consisting of injections of plasmid DNA and peptide-pulsed spleen cells led to a fourfold redn. in the growth rate of preexisting tumors. The data presented demonstrate that immunization with xenoantigens induces cross-species priming leading to an immunol. response against the tumor-specific antigens.

#### IT 162558-08-9

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (combined DNA and peptide vaccine against gp100 in a malignant

melanoma)

THERE ARE 32 CITED REFERENCES AVAILABLE REFERENCE COUNT: 32 FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

ANSWER 19 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

2001:319754 HCAPLUS

DOCUMENT NUMBER:

134:339527

TITLE:

Method of inducing and/or enhancing an immune

response to tumor antigens

INVENTOR(S):

Berinstein, Neil; Tartaglia, James; Moingeon,

Philippe; Barber, Brian

PATENT ASSIGNEE(S):

Aventis Pasteur Limited, Can.

SOURCE:

PCT Int. Appl., 60 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

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FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PA. | rent | NO.  |     | KI  | ND  | DATE |      |     | A)  | PPLI | CATI | ои ис | ο.  | DATE  |      |     |
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|     |      |      |     |     |     |      |      |     |     |      |      |       |     |       |      |     |
| WO  | 2001 | 0303 | 32  | A   | 1   | 2001 | 0503 |     | W   | 20   | 00-C | A125  | 3   | 2000: | 1020 |     |
|     | W:   | ΑE,  | AG, | AL, | AM, | AT,  | AU,  | ΑZ, | BA, | BB,  | BG,  | BR,   | BY, | ΒZ,   | CA,  | CH, |
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 WO 2000-CA1254
 20001020
 WO 2001030847
 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
 CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH,
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 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL
 JP 2003512437
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 JP 2001-532799
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 JP 2003512829
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 JP 2001-533844
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 US 1999-160879P P
 19991022
PRIORITY APPLN. INFO.:
 20000807
 P
 US 2000-223325P
 WO 2000-CA1253
 W
 20001020
 WO 2000-CA1254
 W
 20001020
AB
 An improved method of inducing and/or enhancing an immune response
 to a tumor antigen is disclosed. The method involves administering
 the tumor antigen, nucleic acid coding therefor, vectors and/or
 cells comprising said nucleic acid, or vaccines comprising the
 aforementioned to a lymphatic site.
ΙT
 337989-60-3
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (amino acid sequence; vector encoding tumor antigen as
 vaccine at lymphatic site for cancer immunotherapy)
IT
 337916-59-3
 RL: PRP (Properties)
 (unclaimed sequence; method of inducing and/or enhancing an
 immune response to tumor antigens)
 THERE ARE 4 CITED REFERENCES AVAILABLE FOR
REFERENCE COUNT:
 4
 THIS RECORD. ALL CITATIONS AVAILABLE IN
 THE RE FORMAT
 ANSWER 20 OF 51
 HCAPLUS COPYRIGHT 2003 ACS on STN
 2001:284118 HCAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
 134:309695
 Hepatitis B virus preS2 proteins containing
TITLE:
 tumor or pathogen epitopes and DNA constructs
 encoding them for use in induction of CTL
 response
 Firat, Hueseyin; Lemonnier, Francois;
INVENTOR(S):
 Langlade-Demoyen, Pierre
 Institut Pasteur, Fr.
PATENT ASSIGNEE(S):
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SOURCE: PCT Int. Appl., 70 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent English

LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE ----\_\_\_\_\_ -----WO 2000-EP9902 WO 2001027291 A1 20010419 20000929 WO 2001027291 C2 20020906 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG 20021107 US 2002-106487 20020327 US 2002164721 A1 US 1999-158356P P 19991012 PRIORITY APPLN. INFO.: B1 20000929 US 2000-675673

AB Polyepitope proteins comprising an hepatitis B preS2 antigen into which is inserted epitopes of viral, fungal, bacterial or tumor antigens are disclosed. Also disclosed are nucleotide sequences encoding such hybrid proteins, vectors contg. these sequences, and the use of the polyepitope proteins or nucleotide sequences encoding them for induction of CTL responses. H-2 class I neg., HLA-A2.1 transgenic HHD mice were used for a comparative evaluation of the immunogenicity of HLA-A2.1 restricted human tumor-assocd. CTL epitopes and HIV 1-derived epitopes. A hierarchy was established among these epitopic peptides injected into mice in IFA which correlates globally with their capacity to bind and stabilize HLA-A2.1 mols. A tyrosine substitution in position 1 of the HIV 1-derived epitopic peptides, which increases both their affinity for and their HLA-A2.1 mol. stabilizing capacity, was introduced in a significant proportion of them. DNA immunizations were performed using a construct comprising nucleic acids encoding the epitopes inserted into the pre-S2 segment of the hepatitis B middle glycoprotein. CTL responses against most of the inserted epitopes could be elicited simultaneously in a single animal.

# IT 162558-08-9 332959-83-8

RL: PRP (Properties)

(unclaimed sequence; hepatitis B virus preS2 proteins contg. tumor or pathogen epitopes and DNA constructs encoding them for use in induction of CTL response)

REFERENCE COUNT:

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 21 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

3

ACCESSION NUMBER:

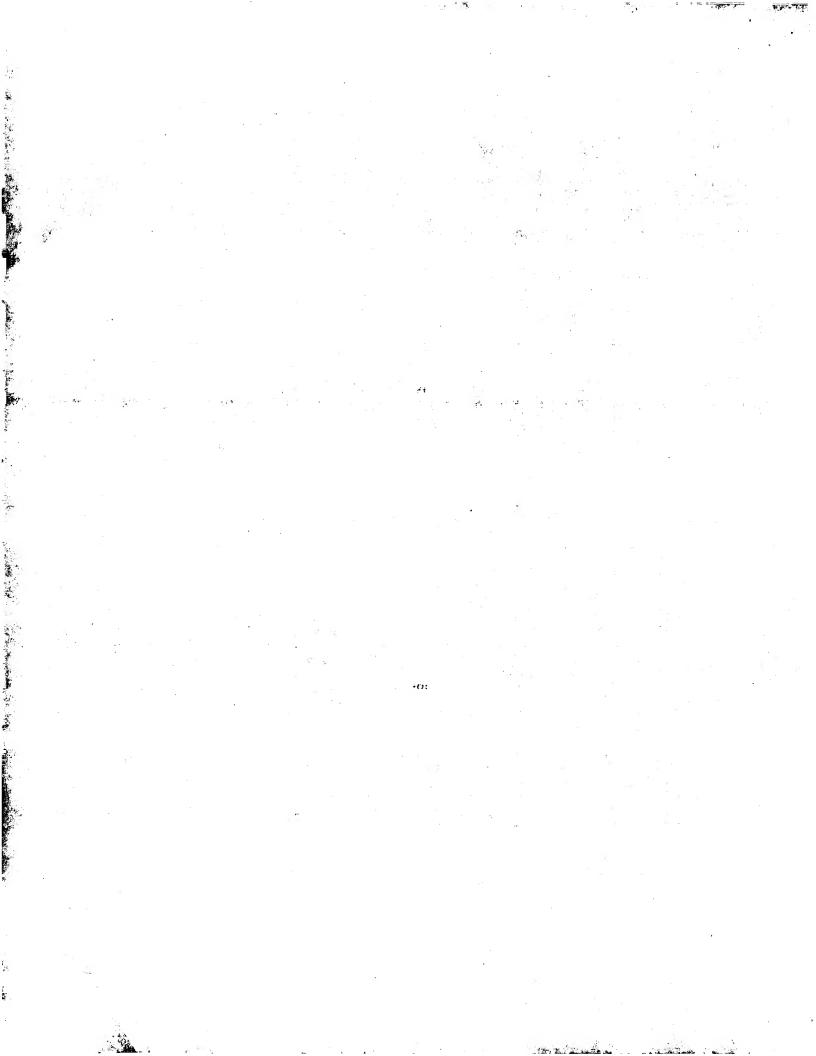
2001:247508 HCAPLUS

DOCUMENT NUMBER:

134:279565

TITLE:

Comparative evaluation of the immunogenicity of HLA-A2.1 restricted human tumor-assocd. CTL epitopes comprising hepatitis B virus sequences



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using H-2 class I negative HLA-A2.1 transgenic
 HHD mice
 Firat, Hueseyin; Lemonnier, Francois;
INVENTOR(S):
 Langlade-Demoyen, Pierre; Michel, Marie-Louise;
 Suhrbier, Andreas A.
 Institut Pasteur, Fr.
PATENT ASSIGNEE(S):
 PCT Int. Appl., 36 pp.
SOURCE:
 CODEN: PIXXD2
DOCUMENT TYPE:
 Patent
 English
LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
 APPLICATION NO.
 DATE
 PATENT NO.
 KIND DATE

 WO 2000-EP9900
 20000929
 WO 2001023577
 A2
 20010405
 А3
 20010517
 WO 2001023577
 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
 CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
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 UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU,
 TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,
 BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 US 1999-156945P P 19990930
PRIORITY APPLN. INFO.:
 H-2 class I neg., HLA-A2.1 transgenic HHD mice were used for a
 comparative evaluation of the immunogenicity of HLA-A2.1 restricted
 human tumor-assocd. CTL epitopes. A hierarchy was established among
 these epitopic peptides injected into mice in IFA which correlates
 globally with their capacity to bind and stabilize HLA-A2.1 mols.
 Co-injection of a helper peptide enhanced most CTL responses. In
 contrast, classical HLA class I transgenic mice which still express
 their own class I mols. did not, in most cases, develop
 H.A.-A2.1-restricted CTL responses under the same exptl. conditions.
 Different monoepitopic immunization strategies of acceptable clin.
 usage were compared in HHD mice. Recombinant Ty-virus-like
 particles, or DNA encoding epitopes fused to the hepatitis B virus
 middle envelope protein gave the best results. Using this latter
 approach and a melanoma-based polyepitope construct, CTL responses
 against five distinct epitopes could be elicited simultaneously in a
 single animal. Thus, HHD mice provide a versatile animal model for
 preclin. evaluation of peptide-based cancer immunotherapy. In
 addn., this invention provides polynucleotides contg. at least part
 of the coding sequence of the middle glycoprotein of the hepatitis B
 virus in which is inserted a DNA sequence coding for an epitope
 comprising at least one tumoral epitope of a tumor antigen.
 162558-08-9
 RL: BPR (Biological process); BSU (Biological study, unclassified);
 PRP (Properties); BIOL (Biological study); PROC (Process)
 (epitopic peptide sequence; comparative evaluation of
 immunogenicity of HLA-A2.1 restricted human tumor
 -assocd. CTL epitopes comprising hepatitis B virus sequences
 using H-2 class I neg. HLA-A2.1 transgenic HHD mice)
IT
 332959-83-8
 RL: PRP (Properties)
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(unclaimed protein sequence; comparative evaluation of the immunogenicity of HLA-A2.1 restricted human tumor -assocd. CTL epitopes comprising hepatitis B virus sequences using H-2 class I neg. HLA-A2.1 transgenic HHD mice)

332959-84-9 ΙT

RL: PRP (Properties)

(unclaimed sequence; comparative evaluation of the immunogenicity of HLA-A2.1 restricted human tumor-assocd. CTL epitopes comprising hepatitis B virus sequences using H-2 class I neg. HLA-A2.1 transgenic HHD mice)

ANSWER 22 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN L4

ACCESSION NUMBER:

2000:384405 HCAPLUS

DOCUMENT NUMBER:

133:29604

TITLE:

Tumor rejection antigens MAGE-A10 and MAGE-A8

able to complex with HLA-A2.1

INVENTOR(S):

Huang, Lan-Qing; Van Pel, Aline; Brasseur, Francis; De Plaen, Etienne; Boon, Thierry Ludwig Institute for Cancer Research, USA

PATENT ASSIGNEE(S):

PCT Int. Appl., 80 pp.

SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE: LANGUAGE:

Patent English

1

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
|               |      |          |                 |          |
| WO 2000032769 | A2   | 20000608 | WO 1999-IB2018  | 19991126 |
| WO 2000032769 | A3   | 20001019 |                 |          |
| W: AU, JP,    | US   |          |                 | •        |

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

EP 1999-958438 19991126 20010912 EP 1131426 Α2 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

20020924 JP 2000-585400 19991126 JP 2002531088 Т2 GB 1998-26143 19981127 PRIORITY APPLN. INFO.: Α WO 1999-IB2018 W 19991126

Autologous cytolytic T lymphocyte clones are obtained from a AB melanoma patient, LB 1751, which recognize and hallow the identification of hitherto unknown HLA-A2.1-presented tumor rejection antigens encoded by MAGE-A10 and MAGE-A8. The cDNA and deduced amino acid sequences of MAGE-A10 and MAGE-A8 are provided.

IT 162558-08-9

RL: PRP (Properties)

(unclaimed sequence; tumor rejection antigens MAGE-A10 and MAGE-A8 able to complex with HLA-A2.1)

ANSWER 23 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN T.4

ACCESSION NUMBER:

2000:261711 HCAPLUS

DOCUMENT NUMBER:

133:29405

TITLE:

Dendritic cells infected with a vaccinia vector carrying the human gp100 gene simultaneously present multiple specificities and elicit high-affinity T cells reactive to multiple epitopes and restricted by HLA-A2 and -A3

AUTHOR(S):

Yang, Sixun; Kittlesen, David; Slingluff, Craig

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L., Jr.; Vervaert, Carol E.; Seigler, Hilliard

F.; Darrow, Timothy L.

CORPORATE SOURCE: Department of Surgery, Duke University Medical

Center, Durham, NC, 27710, USA

SOURCE: Journal of Immunology (2000), 164(8), 4204-4211

CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

DOCUMENT TYPE: Journal LANGUAGE: English

To investigate the ability of human dendritic cells (DC) to process AΒ and present multiple epitopes from the gp100 melanoma tumor-assocd. Ags (TAA), DC from melanoma patients expressing HLA-A2 and HLA-A3 were pulsed with gp100-derived peptides G9154, G9209, or G9280 or were infected with a vaccinia vector (Vac-Pmel/gp100) contg. the gene for gp100 and used to elicit CTL from autologous PBL. CTL were also generated after stimulation of PBL with autologous tumor. CTL induced with autologous tumor stimulation demonstrated HLA-A2-restricted, qp100-specific lysis of autologous and allogeneic tumors and no lysis of HLA-A3-expressing, gp100+ target cells. CTL generated by G9154, G9209, or G9280 peptide-pulsed, DC-lysed, HLA-A2-matched EBV transformed B cells pulsed with the corresponding peptide. CTL generated by Vac-Pmel/gp100-infected DC (DC/Pmel) lysed HLA-A2- or HLA-A3-matched B cell lines pulsed with the HLA-A2-restricted G9154, G9209, or G9280 or with the HLA-A3-restricted G917 peptide derived from gp100. Furthermore, these DC/Pmel-induced CTL demonstrated potent cytotoxicity against allogeneic HLA-A2- or HLA-A3-matched gp100+ melanoma cells and autologous tumor. The authors conclude that DC-expressing TAA present multiple gp100 epitopes in the context of multiple HLA class I-restricting alleles and elicit CTL that recognize multiple qp100-derived peptides in the context of multiple HLA class I alleles. The data suggest that for tumor immunotherapy, genetically modified DC that express an entire TAA may present the full array of possible CTL epitopes in the context of all possible HLA alleles and may be superior to DC pulsed with limited nos. of defined peptides.

IT 162558-08-9

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(dendritic cells transduced with melanoma gp100 gene

elicit both HLA-A2- and HLA-A3-restricted cytotoxic T-cells to)
REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE

IN THE RE FORMAT

L4 ANSWER 24 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:241272 HCAPLUS

DOCUMENT NUMBER: 132:292703

TITLE: Tumor antigens and CTL clones isolated by a

novel procedure

INVENTOR(S): Chaux, Pascal; Luiten, Rosalie; Demotte,

Nathalie; Duffour, Marie-therese; Lurquin, Christophe; Traversari, Catia; Stroobant, Vincent; Cornelis, Guy R.; Boon-falleur, Thierry; Van Der Bruggen, Pierre; Schultz,

Erwin; Warnier, Guy; et al.

PATENT ASSIGNEE(S): Belg.

SOURCE: PCT Int. Appl., 99 pp.

CODEN: PIXXD2

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DOCUMENT TYPE:

Patent

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English

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PATENT INFORMATION:

|      | PAT  | rent 1 | NO.  |      | KII | ND  | DATE |      |     | A    | PPLI | CATI  | ON NO | ٥.  | DATE |      |     |
|------|------|--------|------|------|-----|-----|------|------|-----|------|------|-------|-------|-----|------|------|-----|
|      |      |        |      |      |     |     |      |      |     | _    |      |       |       |     |      |      |     |
|      | WO   | 2000   | 0204 | 45   | A:  | 2   | 2000 | 0413 |     | W    | 0 19 | 99-II | B1664 | 4   | 1999 | 0915 |     |
|      | WO   | 2000   | 0204 | 45   | A.  | 3   | 2000 | 0713 |     |      |      |       |       |     |      |      |     |
|      |      | W:     | ΑU,  | CA,  | CN, | JP, | KR,  | ΝZ,  | US  |      |      |       |       |     |      |      |     |
|      |      | RW:    | ΑT,  | BE,  | CH, | CY, | DE,  | DK,  | ES, | FI,  | FR,  | GB,   | GR,   | ΙE, | IT,  | LU,  | MC, |
|      |      |        | NL,  | PT,  | SE  |     |      |      |     |      |      |       |       |     |      |      |     |
|      | US   | 6407   | 063  | ·    | В:  | 1   | 2002 | 0618 |     | U    | S 19 | 98-1  | 6586  | 3   | 1998 | 1002 |     |
|      | US   | 6531   | 451  |      | B:  | l   | 2003 | 0311 |     | U    | S 19 | 99-2  | 89350 | 0   | 1999 | 0409 |     |
|      | ΑU   | 9959   | 929  |      | A:  | 1   | 2000 | 0426 |     | A    | U 19 | 99-5  | 9929  |     | 1999 | 0915 |     |
|      | EΡ   | 1117   | 679  |      | A:  | 2   | 2001 | 0725 |     | Ε    | P 19 | 99-9  | 7009: | 1   | 1999 | 0915 |     |
|      |      | R:     | AT,  | BE,  | CH, | DE, | DK,  | ES,  | FR, | GB,  | GR,  | IT,   | LI,   | LU, | NL,  | SE,  | MC, |
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|      | JΡ   | 2003   | 5189 | 11   | T   | 2   | 2003 | 0617 |     | J    | P 20 | 00-5  | 74550 | 6   | 1999 | 0915 |     |
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|      |      |        |      |      |     |     |      |      | 1   | US 1 | 999- | 2893  | 50    | Α   | 1999 | 0409 |     |
|      |      |        |      |      |     |     |      |      | Ţ   | WO I | 999- | IB16  | 64    | W   | 1999 | 0915 |     |

The present invention relates to isolation of cytotoxic T lymphocyte AB (CTL) clones. In particular, the present invention relates to isolated CTL clones that are specific for proteins of the MAGE family. The CTL clones of the present invention have been isolated by successive steps of stimulation and testing of lymphocytes with antigen presenting cells which present antigens derived from different expression systems, e.g., from recombinant Yersinia , recombinant Salmonella , or recombinant viruses. The present invention further relates to antigenic peptides as well as the peptide/HLA complexes which are recognized by the isolated CTL clones.

#### IT 162558-08-9

RL: PRP (Properties)

(unclaimed sequence; tumor antigens and CTL clones isolated by a novel procedure)

ANSWER 25 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

2000:175691 HCAPLUS

DOCUMENT NUMBER:

132:220880

TITLE:

A tumor rejection antigen encoded by an alternative open reading frame of the human macrophage colony-stimulating factor gene and

its role in renal cell carcinomas

INVENTOR(S):

Probst-Kepper, Michael; Van Den Eynde, Benoit;

Boon-Falleur, Thierry

PATENT ASSIGNEE(S):

Ludwig Institute for Cancer Research, USA

PCT Int. Appl., 74 pp. SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
|               |      |          |                 |          |
| WO 2000013699 | A1   | 20000316 | WO 1999-US20344 | 19990903 |

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W: AU, JP, US

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NL, PT, SE

20000327 AU 1999-60273 19990903 AU 9960273 . A1 20010627 EP 1999-968629 19990903 EP 1109568 A1 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,

PT, IE, FI

US 1998-99077P PRIORITY APPLN. INFO.: Ρ 19980904 US 1998-99077 Ρ 19980904

WO 1999-US20344 W 19990903

A tumor rejection antigen encoded by an alternative open reading AB frame of the macrophage colony stimulating factor gene that is expressed in renal cell carcinoma is identified and characterized. The antigen can be used in the diagnosis, prophylaxis and treatment of renal cell carcinoma. The antigen was identified as one recognized by cytotoxic T-lymphocytes and a cDNA was cloned by screening an expression library in 293-EBNA cells using cells expressing HLA-B\*3501 and HLA-Cw\*0401 genes from the cytotoxic T-lymphocytes. Sequencing of the cDNA showed that it was derived from a splice variant of the macrophage colony-stimulating factor transcript. AN HLA-B35-binding peptide of the antigen was The antigen was found in normal renal tubular cells and identified. hepatocytes but not in other major tissues tested. Expression was regulated independently from that of macrophage colony-stimulating factor.

### 162558-08-9 TΤ

RL: PRP (Properties)

(unclaimed sequence; tumor rejection antigen encoded by an alternative open reading frame of the human macrophage colony-stimulating factor gene and its role in renal cell

carcinomas)

THERE ARE 3 CITED REFERENCES AVAILABLE FOR REFERENCE COUNT: 3

THIS RECORD. ALL CITATIONS AVAILABLE IN

THE RE FORMAT

HCAPLUS COPYRIGHT 2003 ACS on STN L4ANSWER 26 OF 51

2000:146226 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 132:292403

The density of peptides displayed by dendritic TITLE:

cells affects immune responses to human

tyrosinase and gp100 in HLA-A2 transgenic mice

Bullock, Timothy N. J.; Colella, Teresa A.; AUTHOR(S):

Engelhard, Victor H.

Department of Microbiology and Carter Immunology CORPORATE SOURCE:

Center, University of Virginia, Charlottesville,

VA, 22908, USA

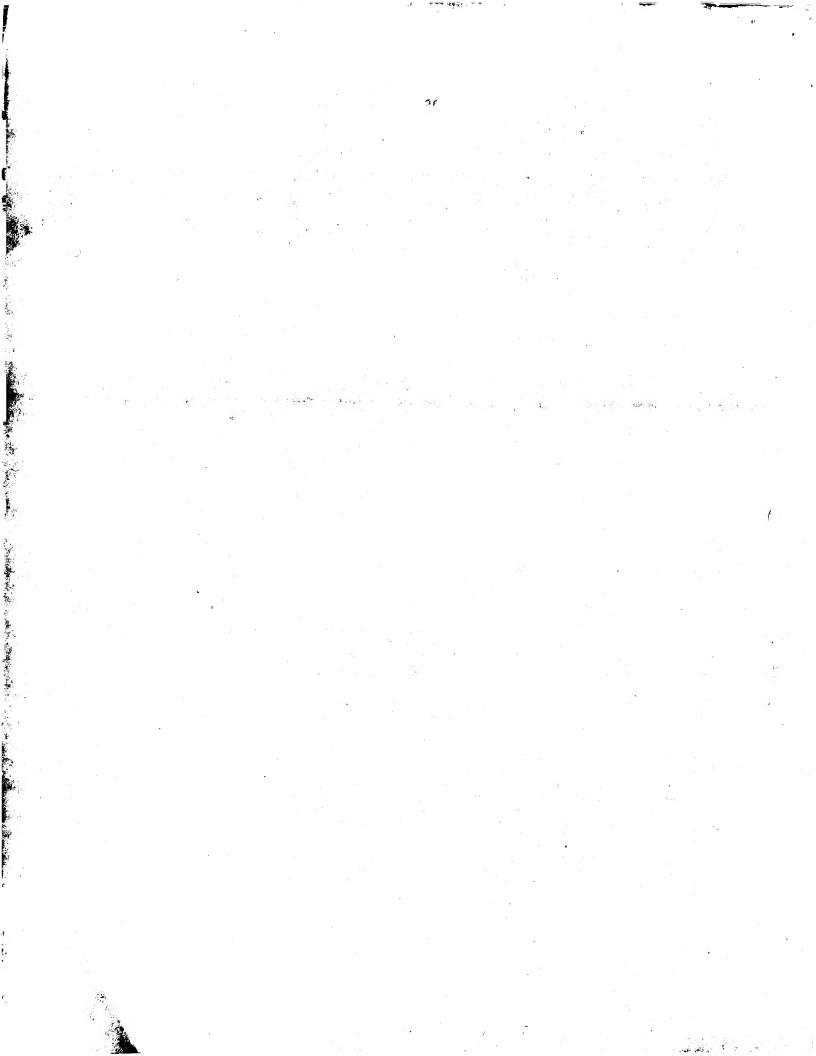
SOURCE: Journal of Immunology (2000), 164(5), 2354-2361

CODEN: JOIMA3; ISSN: 0022-1767

American Association of Immunologists PUBLISHER:

DOCUMENT TYPE: Journal LANGUAGE: English

Several HLA-A\*0201-restricted peptide epitopes that can be used as targets for active immunotherapy have been identified within melanocyte differentiation proteins. However, uncertainty exists as to the most effective way to elicit CD8+ T cells with these epitopes in vivo. The authors report the use of transgenic mice expressing a deriv. of HLA-A $\star$ 0201, and dendritic cells, to enhance the activation of CD8+ T cells that recognize peptide epitopes derived from human



tyrosinase and glycoprotein 100. The authors find that by altering the cell surface d. of the immunizing peptide on the dendritic cells, either by pulsing with higher concns. of peptide, or by changing the MHC-peptide-binding affinity by generating variants of the parent peptides, the size of the activated CD8+ T cell populations can be modulated in vivo. Significantly, the d. of peptide that produced the largest response was less than the max. d. achievable through short-term peptide pulsing. The authors have also found, however, that while some variant peptides are effective at eliciting both primary and recall CD8+ T cell responses that can recognize the parental epitope, other variant epitopes lead to the outgrowth of CD8+ T cells that only recognize the variant. HLA-A\*0201 transgenic mice provide an important model to define which peptide variants are most likely to stimulate CD8+ T cell populations that recognize the parental, melanoma-specific peptide. 162558-08-9

IT 162558-08-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological

(peptide d. on dendritic cells affects T-cell responses to HLA-A2-restricted melanoma antigens in transgenic

REFERENCE COUNT:

56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 27 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

2000:98598 HCAPLUS

DOCUMENT NUMBER:

132:150600

TITLE:

Endogenous retrovirus tumor associated nucleic

APPLICATION NO

·DATE

acids and antigens

INVENTOR(S):

Coulie, Pierre; Boon-Falleur, Thierry Ludwig Institute for Cancer Research, USA

PATENT ASSIGNEE(S):

PCT Int. Appl., 78 pp.

SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE:

: Patent

LANGUAGE:

English

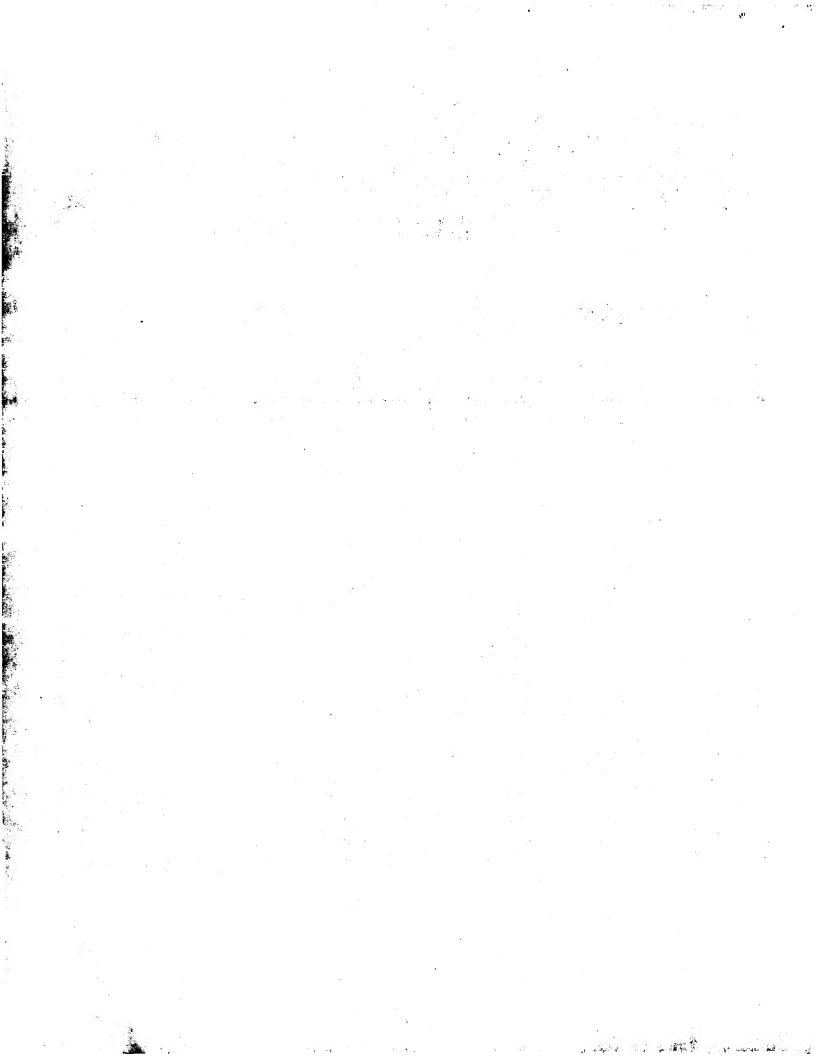
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FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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|       | WO  | 2000  | 00659<br>AU, | -         | A1 20000210 |     |      |      | WO 1999-US16236 |    |                |      |         | 1999 | 0715 |      |     |
|       |     |       | AT,          | BE,       |             | CY, | DE,  | DK,  | ES,             | FI | , FR,          | GB,  | GR,     | ΙE,  | IT,  | LU,  | MC, |
|       | AU  | 9950  | •            | PT,       | SE A        | 1   | 2000 | 0221 |                 |    | AU 19          | 99-5 | 0028    |      | 1999 | 0715 |     |
|       | EP  | 1100  |              |           | A.          | 1   | 2001 |      |                 |    | EP 19          |      |         | -    | 1999 |      |     |
|       |     | R:    |              |           | -           | DE, | DK,  | ES,  | FR,             | GB | , GR,          | IT,  | LI,     | LU,  | NL,  | SE,  | MC, |
|       | JР  | 2002  | •            | IE,<br>51 |             | 2   | 2002 | 0716 |                 |    | JP 20          | 00-5 | 6239    | 4    | 1999 | 0715 |     |
| PRIOR | RIT | Y APP | LN.          | INFO      | . :         |     |      |      |                 |    | 1998-          |      |         |      | 1998 |      |     |
|       |     |       |              |           |             |     |      |      |                 |    | 1998-<br>1999- |      |         |      | 1998 |      |     |
|       |     |       |              |           |             |     |      |      | _               | -  |                |      |         |      |      |      |     |

AB The invention describes HERV-AVL3-B tumor assocd. genes, including fragments and biol. functional variants thereof. Also included are polypeptides and fragments thereof encoded by such genes, and antibodies relating thereto. Methods and products also are provided



for diagnosing and treating conditions characterized by expression of a HERV-AVL3-B gene product.

IT 162558-08-9

RL: PRP (Properties)

(unclaimed sequence; endogenous retrovirus tumor

assocd. nucleic acids and antigens)

REFERENCE COUNT:

2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN

THE RE FORMAT

L4 ANSWER 28 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:13836 HCAPLUS

DOCUMENT NUMBER: 132:333090

TITLE: Competition for binding between peptides in

peptide-based vaccines

AUTHOR(S): Thompson, Lee W.; Brinckerhoff, Laurence H.;

Slingluff, Craig L., Jr.

CORPORATE SOURCE: Department of Surgery, University of Virginia,

Charlottesville, VA, USA

SOURCE: Surgical Forum (1998), 49, 458-460

CODEN: SUFOAX; ISSN: 0071-8041 American College of Surgeons

PUBLISHER: American
DOCUMENT TYPE: Journal
LANGUAGE: English

AR When mixts. of peptides in multivalent vaccines are used, a key question is whether the peptides with a higher affinity for binding to the MHC will competitively block MHC binding of other peptides below the threshold necessary for T cell recognition. Here, a high-affinity peptide epitope for melanoma-reactive cytotoxic T cells (gp10054-162) and a high affinity peptide epitope for flu-reactive CTLs (influenza M158-66) were combined and these peptides were pulsed at various ratios onto antigen-presenting cells. At equimolar concns. of high-affinity peptides, no blocking of T cell recognition could be seen. Only with a 100-fold excess of M1 was the response to melanoma-reactive CTLs to gp100-peptide reduced. These data suggest that the use of mixts. of peptide in peptide-based vaccines may not cause significant competitive inhibition of MHC binding as long as the peptides are used at equimolar concns.

IT 162558-08-9P

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(melanoma-high affinity gp100; competition for binding

between peptides in peptide-based vaccines)

REFERENCE COUNT: . 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN

THE RE FORMAT

L4 ANSWER 29 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

1999:677539 HCAPLUS

DOCUMENT NUMBER:

132:48743

TITLE:

H-2 class I knockout, HLA-A2.1-transgenic mice.

A versatile animal model for preclinical evaluation of antitumor immunotherapeutic

strategies

AUTHOR(S):

Firat, Huseyin; Garcia-Pons, Francisco; Tourdot,

Sophie; Pascolo, Steve; Scardino, Antonio;

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Garcia, Zacarias; Michel, Marie-Louise; Jack, Ralph Wiliams; Jung, Gunther; Kosmatopoulos, Konstadinos; Mateo, Luis; Suhrbier, Andreas; Lemonnier, Francois A.; Langlade-Demoyen, Pierre

Unite Immunite Cellulaire Antivirale, Dep.

SIDA-Retrovirus, Institut Pasteur, Paris,

F-75724, Fr.

SOURCE: European Journal of Immunology (1999), 29(10),

3112-3121

CODEN: EJIMAF; ISSN: 0014-2980

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal LANGUAGE: English

H-2 class I-neq., HLA-A2.1-transgenic HHD mice were used for a AΒ comparative evaluation of the immunogenicity of HLA-A2.1-restricted human tumor-assocd. cytotoxic T lymphocyte (CTL) epitopes. A hierarchy was established among these peptides injected into mice in incomplete Freund's adjuvant which correlates globally with their capacity to bind and stabilize HLA-A2.1 mols. Co-injection of a helper peptide enhanced most CTL responses. In contrast, classical HLA class I-transgenic mice which still express their own class I mols. did not, in most cases, develop HLA-A2.1-restricted CTL responses under the same exptl. conditions. Different monoepitope immunization strategies of acceptable clin. usage were compared in HHD mice. Recombinant Ty-virus-like particles, or DNA encoding epitopes fused to the hepatitis B virus middle envelope protein gave the best results. Using this latter approach and a melanoma-based polyepitope construct, CTL responses against 5 distinct epitopes could be elicited simultaneously in a single animal. Thus, HHD mice provide a versatile animal model for preclin. evaluation of peptide-based cancer immunotherapy.

162558-08-9

CORPORATE SOURCE:

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(preclin. evaluation of peptide-based cancer

immunotherapy using HLA-A2.1-restricted tumor-assocd.

CTL epitopes)

REFERENCE COUNT:

. THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

HCAPLUS COPYRIGHT 2003 ACS on STN L4 ANSWER 30 OF 51

ACCESSION NUMBER:

1999:673033 HCAPLUS

DOCUMENT NUMBER:

131:321139

TITLE:

SOURCE:

Genes expressed in tumors encoding tumor

rejection antigen precursors and their

diagnostic and therapeutic uses

INVENTOR(S):

Martelange, Valerie; De Smet, Charles;

Boon-Falleur, Thierry

PATENT ASSIGNEE(S):

Ludwig Institute for Cancer Research, USA

PCT Int. Appl., 93 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent English

LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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 PATENT NO.
 KIND DATE
 APPLICATION NO.

 A2
 19991021
 WO 1999-US8163
 19990414
 WO 9953061
 WO 9953061
 A3
 20000323
 W: AU, CA, CN, JP, KR, NZ, ZA
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
 NL, PT, SE
 20010612
 US 1998-183706
 19981030
 US 6245525
 B1
 · AU 1999-35603
 19990414
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 19991101
 EP 1999-917493
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 EP 1073734
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 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, FI
 JP 2000-543609
 19990414
 JP 2002511266
 20020416
 US 1998-60706 A 19980415
PRIORITY APPLN. INFO.:
 A 19980727
 US 1998-122989
 US 1998-183706 A 19981030
 A 19981030
 US 1998-183789
 W 19990414
 WO 1999-US8163
 Genes encoding tumor rejection antigen precursors SAGE (sdph3.10),
 sdp3.5 and HAGE (sdp3.8) are cloned and their products characterized
 for therapeutic use. Methods and products also are provided for
 diagnosing and treating conditions characterized by expression of
 sdph3.10, sdp3.5 and/or sdp3.8 gene products. Genes specific to a
 sarcoma were identified by representational difference anal. Many
 were found to be genes normally assocd. with cell proliferation, and
 of the remainder, three showed ectopic expression in tumors, i.e.
 were expressed in a tumor, not in the corresponding normal tissue,
 but were expressed in other normal tissues. The genes showed normal
 expression in tissues of the reproductive system (uterus, mammary
 gland, testis) and skin.
IT
 162558-08-9
 RL: PRP (Properties)
 (unclaimed sequence; genes expressed in tumors encoding
 tumor rejection antigen precursors and their diagnostic
 and therapeutic uses)
 ANSWER 31 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN
 1999:628118 HCAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
 131:350041
 An HLA-A2 polyepitope vaccine for melanoma
TITLE:
 immunotherapy
 Mateo, Luis; Gardner, Joy; Chen, Qiyuan;
AUTHOR(S):
 Schmidt, Christopher; Down, Michelle; Elliott,
 Suzanne L.; Pye, Stephanie J.; Firat, Huseyin;
 Lemonnier, Francois A.; Cebon, Jonathon;
 Suhrbier, Andreas
CORPORATE SOURCE:
 Australian Centre for International and Tropical
 Health and Nutrition, Co-operative Research
 Centre for Vaccine Technology, Queensland
 Institute of Medical Research and University of
 Queensland, Queensland, Australia
 Journal of Immunology (1999), 163(7), 4058-4063
SOURCE:
 CODEN: JOIMA3; ISSN: 0022-1767
 American Association of Immunologists
PUBLISHER:
DOCUMENT TYPE:
 Journal
LANGUAGE:
 English
 Epitope-based vaccination strategies designed to induce
 tumor-specific CD8 CTL are being widely considered for cancer
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|                    |          |       |    |   |    |       |     | 4. 7       | m   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |       |     |
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| , v <sub>e</sub> _ | -7       | 00    |    |   |    | ,-,-1 | v 5 | e - 1 11 1 |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | and the second | * .   |     |
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|                    |          |       |    | * |    |       |     | vi.        |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |       |     |
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|                    | <b>,</b> |       |    |   |    |       |     |            |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |       |     |
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immunotherapy. Here the authors describe a recombinant poxvirus vaccine that codes for 10 HLA-A2-restricted epitopes derived from 5 melanoma Ags conjoined in an artificial polyepitope or polytope construct. Target cells infected with the melanoma polytope vaccinia were recognized by 3 different epitope-specific CTL lines derived from HLA-A2 melanoma patients, and CTL responses to 7 of the epitopes were generated in at least one of 6 HLA-A2-transgenic mice immunized with the construct. CTL lines derived from vaccinated transgenic mice were also able to kill melanoma cells in vitro. Multiple epitopes within the polytope construct were therefore shown to be individually immunogenic, illustrating the feasibility of the polytope approach for melanoma immunotherapy. Tumor escape from CTL surveillance, through down regulation of individual tumor Ags and MHC alleles, might be overcome by polytope vaccines, which simultaneously target multiple cancer Ags.

ΙT 162558-08-9

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(HLA-A2 polyepitope vaccine for melanoma immunotherapy)

ΙT 250672-73-2

RL: PRP (Properties)

(amino acid sequence; HLA-A2 polyepitope vaccine for

melanoma immunotherapy)

REFERENCE COUNT:

THERE ARE 5.3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 32 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

131:256325

53

ACCESSION NUMBER:

1999:613608 HCAPLUS

DOCUMENT NUMBER:

TITLE:

Methods for enhanced antigen presentation on

antigen-presenting cells and compositions

produced thereby

INVENTOR(S):

Nicolette, Charles A.; Kaplan, Johanne

PATENT ASSIGNEE(S):

SOURCE:

Genzyme Corporation, USA

PCT Int. Appl., 67 pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PA           | TENT                     | NO.        | KI      | ND | DATE                 | ·    |     | AF          | PLIC           | CATIO | ON NC         | Э.  | DATE           |     |     |
|--------------|--------------------------|------------|---------|----|----------------------|------|-----|-------------|----------------|-------|---------------|-----|----------------|-----|-----|
| -            | WO 9947102<br>WO 9947102 |            |         |    |                      |      |     | WC          | WO 1999-US6031 |       |               | 1   | 19990          |     |     |
|              |                          |            | CH,     |    | DE,                  | DK,  | ES, | FI,         | FR,            | GB,   | GR,           | IE, | IT,            | LU, | MC, |
| AU           | 2322<br>9931<br>7551     | 750<br>023 | A.<br>A | 1  | 1999<br>1999<br>2002 | 1011 |     |             |                |       | 3227!<br>1023 |     | 19990<br>19990 |     |     |
|              | 1063                     | 891        | Α       | 2  | 2001                 | 0103 |     |             |                |       |               |     | 19990<br>NL,   |     | MC, |
| JP<br>RIORIT | 2002<br>Y APP            | 5066       | <br>T   | 2  | 2002                 | 0305 |     | JE<br>US 19 |                |       | 3634:<br>0P   |     | 19990<br>19980 |     |     |

Searcher : 308-4994 Shears

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| × 7, |      |   |   |                          |   | المناف المستعدد       |                  |                              |

WO 1999-US6031 W 19990319 The present invention provides compns. and methods for improved AB immunotherapy and cancer vaccine, and in particular for inducing an immune response against an antigen in a patient. Thus, in one aspect, this invention provides genetically modified antigen-presenting cells which are more potent presenters of exogenous peptide than parental antigen-presenting cells. Compns. comprising these genetically modified cells and a carrier, such as pharmaceutically acceptable carrier, are further provided by this invention. The genetically modified antigen-presenting cells of this invention can be used in adoptive immunotherapy or to expand a substantially pure population of immune effector cells. Methods for expansion of the substantially pure population of cells are also provided by this invention. Described were cytotoxic T cell epitopes of HSV-1 and HSV-2 ICP47 peptides, melanoma antigen gp100 and MART1, and human tyrosinase-related protein 2.

IT 244224-43-9

RL: PRP (Properties)

(amino acid sequence; methods for enhanced antigen presentation on antigen-presenting cells and compns. for immunotherapy and as cancer vaccine)

L4 ANSWER 33 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:600664 HCAPLUS

DOCUMENT NUMBER: 132:106619

TITLE: Establishment of gp100 and MART-1/Melan-A-

specific cytotoxic T lymphocyte clones using in

vitro immunization against preselected highly

immunogenic melanoma cell clones

AUTHOR(S): Kirkin, Alexei F.; Straten, Per thor; Hansen,

Mia Riise; Barfoed, Annette; Dzhandzhugazyan,

Karine N.; Zeuthen, Jesper

CORPORATE SOURCE: Department of Tumour Cell Biology, Institute of

Cancer Biology, Danish Cancer Society,

Conenhagen DK-2100 Den

Copenhagen, DK-2100, Den.

SOURCE: Cancer Immunology Immunotherapy (1999), 48(5),

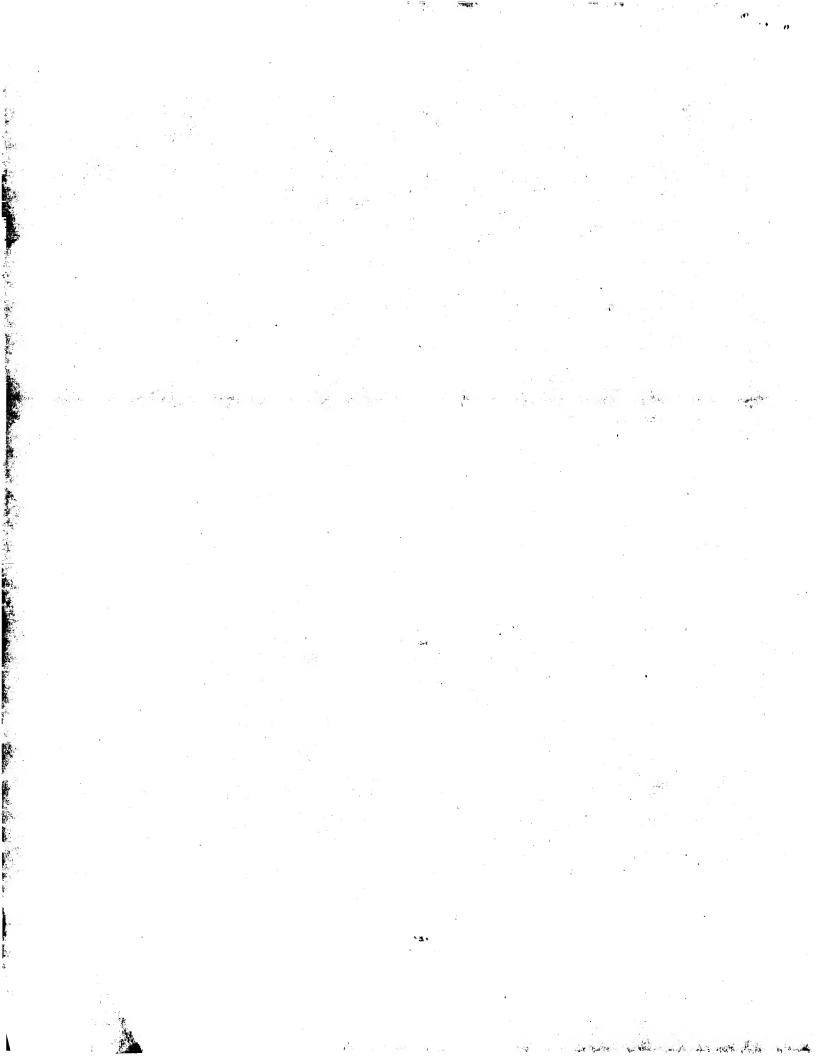
239-246

CODEN: CIIMDN; ISSN: 0340-7004

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal LANGUAGE: English

The induction of an in vitro T cell response against tumor-assocd. antigens with subsequent expansion of the individual cytotoxic T lymphocyte (CTL) clones still is not routine and the only tumor-assocd, antigen that has been found to easily induce the establishment of CTL clones is the MART-1/Melan-A antigen. In this paper, we describe a new approach for in vitro immunization based on the use of preselected melanoma cell clones. The human melanoma cell subline FM3.P was cloned and the immunol. properties of individual clones were compared. Melanoma cell clone FM3.29, having a high level of expression of melanoma differentiation antigens, as well as high levels of the HLA class I and class II antigens and adhesion mols., was used for the establishment of a CTL line that was subsequently cloned. For optimization of the conditions of growth of established CTL clones, a particular melanoma subline FM3.D/40 was selected for supporting the proliferation of CTL The majority of the established CTL clones recognized the melanoma-assocd. differentiation antigens gp100 and MART-1/Melan-A.



Epitope anal. indicated that two different epitopes derived from gp100 (154-162 and 280-288) and a single epitope from MART-1/Melan-A (27-35) were recognized by these CTL clones. The gp100-specific CTL clones were found to be significantly more sensitive to the culture conditions than the MART-1/Melan-A-specific CTL clones. In addn., the presence of excess peptide in the culture medium induced autokilling of the gp100-specific, but not the MART-1/Melan-A-specific CTL clones. These results demonstrate that, by careful preselection of melanoma cell lines and clones both for the induction of CTL line from patients' peripheral blood lymphocytes and subsequent cloning, it is possible to obtain a large no. of stable CTL clones even against such an inherently "difficult" differentiation antigen as gp100.

### IT 162558-08-9

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(melanoma-assocd. antigen; establishment of gp100 and MART-1/Melan-A-specific cytotoxic T lymphocyte clones using in vitro immunization against highly immunogenic melanoma cell clones)

REFERENCE COUNT:

THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 34 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

1999:366631 HCAPLUS

DOCUMENT NUMBER:

131:156878

TITLE:

Characterization of circulating T cells specific

for tumor-associated antigens in melanoma

patients

AUTHOR(S):

Lee, Peter P.; Yee, Cassian; Savage, Peter A.; Fong, Lawrence; Brockstedt, Dirk; Weber, Jeffrey S.; Johnson, Denise; Swetter, Susan; Thompson, John; Greenberg, Philip D.; Roederer, Mario;

Davis, Mark M.

CORPORATE SOURCE:

Howard Hughes Medical Institute/Department of

Microbiology and Immunology, Stanford University, Stanford, CA, 94305, USA

SOURCE:

Nature Medicine (New York) (1999), 5(6), 677-685

CODEN: NAMEFI; ISSN: 1078-8956

PUBLISHER:

Nature America

DOCUMENT TYPE:

Journal English

LANGUAGE: The authors identified circulating CD8+ T-cell populations specific AΒ for the tumor-assocd. antigens (TAAs) MART-1 (27-35) or tyrosinase (368-376) in 6 of 11 patients with metastatic melanoma using peptide/HLA-A\*0201 tetramers. These TAA-specific populations were of 2 phenotypically distinct types: one, typical for memory/effector T cells; the other, a previously undescribed phenotype expressing both naive and effector cell markers. This latter type represented >2% of the total CD8+ T cells in one patient, permitting detailed phenotypic and functional anal. Although these cells have many of the hallmarks of effector T cells, they were functionally unresponsive, unable to directly lyse melanoma target cells or produce cytokines in response to mitogens. In contrast, CD8+ T cells from the same patient were able to lyse EBV-pulsed target cells and showed robust allogeneic responses. Thus, the clonally

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expanded TAA-specific population seems to have been selectively rendered anergic in vivo. Peptide stimulation of the TAA-specific T-cell populations in other patients failed to induce substantial upregulation of CD69 expression, indicating that these cells may also have functional defects, leading to blunted activation responses. Thus, systemic TAA-specific T-cell responses can develop de novo in cancer patients, but antigen-specific unresponsiveness may explain why such cells are unable to control tumor growth.

IT 162558-08-9

RL: PRP (Properties)

(circulating T cells characterization specific for tumor

-assocd. antigens in **melanoma** patients)
CF COUNT: 47 THERE ARE 47 CIT

REFERENCE COUNT:

THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 35 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:107655 HCAPLUS

DOCUMENT NUMBER: 130:280522

TITLE: Isolation of high avidity melanoma-reactive CTL

from heterogeneous populations using peptide-MHC

tetramers

AUTHOR(S): Yee, Cassian; Savage, Peter A.; Lee, Peter P.;

Davis, Mark M.; Greenberg, Philip D.

CORPORATE SOURCE: Clinical Research Division, Fred Hutchinson

Cancer Research Center, and Departments of Medicine and Immunology, University of

Washington, Seattle, WA, 98109, USA

SOURCE: Journal of Immunology (1999), 162(4), 2227-2234

CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

DOCUMENT TYPE: Journal LANGUAGE: English

Immunogenic peptides of human tumor Ag have been used to generate antigen-specific CTL. However, the vast majority of these peptide-specific CTL clones are of low avidity and are peptide, but not tumor, reactive. Peptide-MHC tetramers have been shown to bind specific TCRs with sufficient affinity to be useful reagents for flow cytometry. In this paper the authors demonstrate that peptide-MHC tetramers can also be used to selectively identify high avidity tumor-reactive CTL and enrich, from a heterogeneous population, the subpopulation of peptide-reactive T cells that can lyse tumor targets. The melanoma proteins, MART-1 and gp100, were used to induce potentially tumor-reactive T cells, and the intensity of T cell staining by TCR binding of specific peptide-MHC tetramers was assessed. A range of fluorescence intensity was detected, and the magnitude of tetramer binding was correlated with T cell The population of peptide-reactive T cells was phenotypically similar with regard to expression of TCR and adhesion mols., suggesting that this differential avidity for tumor cells reflected differential affinity of the TCR for its peptide-MHC ligand. Sorting, cloning, and expansion of tetramerhigh CTL from a heterogeneous population of peptide-stimulated PBMCs enabled rapid selection of high avidity tumor-reactive CTL clones, which retained their functional and tetramerhigh phenotype on re-expansion. results demonstrate that the avidity of a  $T_{\underline{\ }}$  cell for its tumor target is due to the specific affinity of the TCR for its peptide-MHC ligand, that this interaction can be described using

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peptide-MHC tetramers and used to isolate high avidity tumor-reactive CTL. 162558-08-9D, MHC class I tetramers IT RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (isolation of high avidity melanoma-reactive human cytotoxic T-cells by) THERE ARE 46 CITED REFERENCES AVAILABLE REFERENCE COUNT: 46 FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 36 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN 1998:799700 HCAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 130:37302

TITLE:

Melanoma antigens and their use in diagnostic

and therapeutic methods

INVENTOR(S):

Kawakami, Yutaka; Rosenberg, Steven A.

PATENT ASSIGNEE(S):

United States Dept. of Health and Human

Services, USA

SOURCE:

U.S., 76 pp., Cont.-in-part of U.S. Ser. No.

231,565.

CODEN: USXXAM

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

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|       | WO       | 9529                   | 193        |      | A:     | 2    | 1995         | 1102         |            | W        | 10 19   | 95-U  | S506         | 3         | 1995                 | 0421   |       |
|       | WO       | 9529                   |            |      |        |      |              |              | <b>51</b>  | <b>~</b> | <b></b> | CNI   | O.F.         | D.E.      | DIA                  |        | E.C   |
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|       | 7. 11    | 9523                   | ML,        | NE,  | 211    | 10,  | 1005         | 1116         |            | Z        | .rr 10  | 95-2  | 3958         |           | 1995                 | 0421   |       |
|       |          | 7064                   |            |      |        |      |              |              |            |          |         | ,,,,  | 3300         |           |                      |        |       |
|       | EP       | 7566                   | 13<br>04   |      | Α.     | 1    | 1997         | 0205         |            | E        | P 19    | 95-9  | 1715         | 1         | 1995                 | 0421   |       |
|       |          | R:                     | AT.        | BE.  | CH.    | DE.  | DK,          | ES,          | FR,        | GB,      | GR,     | IE,   | IT,          | LI,       | LU,                  | MC,    | NL,   |
|       |          |                        | PT,        |      | ,      | ,    | •            | •            |            | •        | •       | •     |              |           |                      |        |       |
|       | JP       | 1050                   | 5481       |      | T      | 2    | 1998         |              |            |          |         |       |              |           | 1995                 |        |       |
|       | FI       | 9604                   | 235        |      | Α      |      |              |              |            |          |         |       |              |           | 1996                 |        |       |
|       | US       | 5994                   | 523        |      | Α      |      |              |              |            |          | JS 19   | 998-7 | 961          |           | 1998                 | 0116   |       |
|       | US       | 6537                   | 560        |      | В      | 1    | 2003         |              |            |          |         |       |              |           | 1998                 |        |       |
|       |          | 6270                   |            |      |        |      | 2001         |              |            |          |         |       |              |           | 1999                 |        |       |
|       |          | 2003                   |            |      |        |      |              |              |            | Ţ        | JS 20   | 01-8  | 9886         | 0         | 2001                 |        |       |
| PRIO  | RIT:     | APP:                   | LN.        | INFO | .:     |      |              |              |            |          |         |       |              |           | 1994                 |        |       |
|       |          |                        |            |      |        |      |              |              |            | US I     | .995-   | -41/1 | 74           | A         | 1995                 | 0405   |       |
|       |          |                        |            |      |        |      |              |              |            |          |         |       |              |           | 1995<br>1998         |        |       |
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melanoma antigen recognized by T lymphocytes, designated MART-1. This invention further relates to bioassays using the nucleic acid sequence, protein or antibodies of this invention to diagnose, assess or prognoses a mammal afflicted with melanoma or metastatic melanoma. This invention also provides immunogenic peptides derived from the MART-1 melanoma antigen and a second melanoma antigen designated gp100. This invention further provides immunogenic peptides derived from the MART-1 melanoma antigen or gp100 antigen which have been modified to enhance their immunogenicity. The proteins and peptides provided can serve as an immunogen or vaccine to prevent or treat melanoma.

#### IT 162558-08-9 162558-09-0

melanoma and metastasis)

RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (melanoma-assocd. antigens MART-1 and gp100 and epitopes and antibodies for diagnosis and therapy

REFERENCE COUNT: -

THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 37 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

28

ACCESSION NUMBER:

1998:71219 HCAPLUS

DOCUMENT NUMBER:

128:139756

TITLE:

Melanoma-associated peptide analogs and vaccines

against melanoma

INVENTOR(S):

Figdor, Carl Gustav; Adema, Gosse Jan

PATENT ASSIGNEE(S):

Akzo Nobel N.V., Neth.; Figdor, Carl Gustav;

Adema, Gosse Jan

SOURCE:

PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

|      | PATENT NO. |        |            | KIND DATE |           |        |      | AP   | PLI | CATI | ои ис | ο.   | DATE      |          |       |      |       |     |
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|      | WO         | 9802   | <br>538    |           | A:        | 1      | 1998 | 0122 |     |      | WO    | 19   | <br>97-е: | P371     | 2     | 1997 | 07.08 |     |
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|      | ZA         | 9705   | 858        |           | A         |        | 1998 | 0901 |     |      | ZA    | 19   | 97-5      | 858      |       | 1997 | 0701  |     |
|      | CA         | 2259   | 944        |           | A         | A      | 1998 | 0122 |     |      | CA    | 19   | 97-2      | 2599     | 44    | 1997 | 0708  |     |
|      | ΑU         | 9736   | 938        |           | A:        | 1      | 1998 | 0209 |     |      | ΑU    | 19   | 97-3      | 6938     |       | 1997 | 0708  |     |
|      | ΕP         | 9344   | 05         |           | A.        | 1      | 1999 | 0811 |     |      | ΕP    | 19   | 97-9      | 3366     | 4     | 1997 | 0708  |     |
|      | ΕP         | 9344   | 05         |           | В:        | 1      | 2001 | 1010 |     |      |       |      |           |          |       |      |       |     |
|      |            | R:     | ΑT,        | BE,       | CH,       | DE,    | DK,  | ES,  | FR, | GE   | 3,    | GR,  | IT,       | LI,      | LU,   | NL,  | SE,   | MC, |
|      |            |        | PT,        | IE,       | FI        |        |      |      |     |      |       |      |           |          |       |      |       |     |
|      | JΡ         | 2000   | 5157       | 39        | T         | 2      | 2000 | 1128 |     |      | JΡ    | 19   | 98-5      | 0560     | 6     | 1997 | 0708  |     |
|      | ΑT         | 2067   | 59         |           | E         |        | 2001 | 1015 |     |      | AT    | 19   | 97-9      | 3366     | 4     | 1997 | 0708  |     |
|      | ES         | 2165   | 619        |           | T         | 3      | 2002 | 0316 |     |      | ES    | 19   | 97-9      | 3366     | 4     | 1997 | 0708  |     |
| PRIO | RITY       | Y APP  | LN.        | INFO      | . :       |        |      |      |     | EΡ   | 19    | 96-  | 2019      | 45       | Α     | 1996 | 0711  |     |
|      |            |        |            |           |           |        |      |      |     | WO   | 19    | 97-1 | EP37      | 12       | W     | 1997 | 0708  |     |
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AB The MHC class-I binding affinity of an epitope is an important parameter detg. the immunogenicity of the peptide-MHC complex. To improve the immunogenicity of an epitope derived from melanocyte lineage-specific antigen gp100 and Melan-A/MART-1, amino acid

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substitutions were performed within the epitope and both HLA-A\*0201binding and CTL recognition were assayed. Anchor replacements towards the HLA-A\*0201 peptide-binding motif gave rise to peptides with higher HLA-A\*0201 binding capacity compared to the wild-type epitope. In addn., several of the gp100 154-162 epitope-analogs were more efficient at target-cell sensitization for lysis by anti-qp100 154-162 CTL compared to the wild-type epitope. These altered gp100 154-162 epitopes were subsequently tested for their capacity to induce CTL responses in vivo using HLA-A\*0201/Kb transgenic mice, and in vitro using HLA-A\*0201+ donor-derived lymphocytes. Interestingly, the peptide-specific CTL obtained, which were raised against the different gp100 154-162epitope-analogs, displayed cross-reactivity with target cells endogenously processing and presenting the native epitope. These data demonstrate that altered epitopes can be exploited to elicit native epitope-reactive CTL. The use of epitope-analogs with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and cancer.

IT 162558-08-9 1879/4-51-2 202393-35-9

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(analogs of cytotoxic T lymphocyte epitopes with improved MHC class-I binding capacity elicit anti-melanoma CTL recognizing wild-type epitope)

REFERENCE COUNT:

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 38 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

5

ACCESSION NUMBER:

1997:401143 HCAPLUS

DOCUMENT NUMBER:

127:134628

TITLE:

TCR .beta.-chain variable region-driven selection and massive expansion of HLA class

I-restricted antitumor CTL lines from

HLA-A\*0201+ melanoma patients

AUTHOR(S):

Maccalli, Cristina; Farina, Cinthia; Sensi, Marialuisa; Parmiani, Giorgio; Anichini, Andrea Div. Experimental Oncol. D, Natl. Tumor Inst.,

CORPORATE SOURCE:

Milan, 20133, Italy

SOURCE:

Journal of.Immunology (1997), 158(12), 5902-5913

CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER:

American Association of Immunologists

DOCUMENT TYPE: Journal LANGUAGE: English

AB Recognition of a given melanoma antigen (Ag) involves a limited array of T cell clones bearing a structurally defined TCR. The aim here was to verify whether this information can be used to isolate and expand such antitumor effectors from fresh lymphocyte populations. The authors found that 1-3 different TCR .beta.-chain variable (TCRBV) regions were expanded in 4-wk mixed lymphocyte-tumor cultures (MLTC) from 6 HLA-A\*0201+ melanoma patients, and that the T cells expressing the expanded TCRBV regions were involved in HLA class I-restricted lysis of the tumor. T cell activation by mAbs to MLTC-selected TCRBV region and CD28 resulted in large scale expansion (1-10.times.109 cells) of T cell lines, highly enriched for the expression of a single TCRBV region and for CD8+ T cells. The TCRBV-driven selection was equally effective when

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applied to patients' or healthy donors' lymphocytes, and the T cell lines isolated from melanoma patients exerted HLA class I-restricted lysis of the autologous tumor. MLTC and TCRBV-selected lines recognized allogeneic melanomas sharing HLA-A and -B alleles with the autologous tumor, but only 2 of the HLA-A2-restricted lines were directed to a known peptide from melanoma-assocd. Ags. Single-strand conformation polymorphism anal. indicated a polyclonal compn. of both MLTC and TCRBV-selected lines, but expansion of clonotypes with identical CDR3 length was obsd. only in the MLTC lines. Thus, TCRBV-driven selection can be exploited to obtain large scale expansion of antitumor CTL lines from melanoma patients.

162558-08-9 RL: PRP (Properties)

TΤ

(peptides from melanoma-assocd. antigens recognition by mixed lymphocyte tumor culture vs. TCR .beta.-chain variable region-selected cytotoxic T cells)

L4 ANSWER 39 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:169342 HCAPLUS

DOCUMENT NUMBER: 126:249922

TITLE: Anti-melanoma cytotoxic T lymphocytes (CTL)

recognize numerous antigenic peptides having 'self' sequences: autoimmune nature of the

anti-melanoma CTL response

AUTHOR(S): Tsomides, Theodore J.; Reilly, Edward B.; Eisen,

Herman N.

CORPORATE SOURCE: Center Cancer Res. and Dep. Biol., Massachusetts

Inst. Tech., Cambridge, MA, 02139, USA

SOURCE: International Immunology (1997), 9(2), 327-338

CODEN: INIMEN; ISSN: 0953-8178

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal LANGUAGE: English

A line of tumor-infiltrating lymphocytes (660TIL) specifically lysed the autologous HLA-A2+ melanoma (660MEL) and also most A2+ melanoma cell lines. The authors immunopptd. A2 from a large no. (>1012) OF 660MEL cells, extd. naturally processed peptides, fractionated them by HPLC, screened the fractions for recognition by 660TIL, and found a single predominant and a minor peak of activity. Although too little was recovered of the major 660MEL peptide to establish its sequence, HPLC fingerprinting showed that it did not correspond to any of the known A2-assocd. melanoma peptides recognized by T cells, including peptides from tyrosinase, MART-1/Melan-A, gp100, and The major 660MEL antigenic peptide appears to be derived from MART-1/Melan-A but is neither AAGIGILTV nor ILTVILGVL nor any other MART-1/Melan-A peptide contg. the A2 consensus motif. The multiplicity of melanoma peptides recognized by CD8+ T cells, most of which are non-mutated (including most likely the present 660MEL peptide), suggests the existence of unknown mechanisms, perhaps similar to those operating in autoimmune disorders, whereby T cell that recognize normal self sequences become activated.

IT 162558-08-9

RL: PRP (Properties)

(autoimmune nature of anti-melanoma cytotoxic T lymphocytes response to antigenic peptides)

L4 ANSWER 40 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN ACCESSION NUMBER: 1997:167497 HCAPLUS

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| 6.<br>Y                                 |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   |     |                                       |   |
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DOCUMENT NUMBER: 126:210733

SOURCE:

TITLE: Analogs of CTL epitopes with improved MHC

class-I binding capacity elicit anti-melanoma

CTL recognizing the wild-type epitope

AUTHOR(S): Bakker, Alexander B.H.; Van Der Burg, Sjoerd H.;

Huijbens, Richard J.F.; Drijfhout, Jan-Wouter; Melief, Cornelis J.M.; Adema, Gosse J.; Figdor,

Carl G.

CORPORATE SOURCE: Department of Tumor Immunology, University

Hospital Nijmegen St. Radboud, Nijmegen, Neth. International Journal of Cancer (1997), 70(3),

302-309

CODEN: IJCNAW; ISSN: 0020-7136

PUBLISHER: Wiley-Liss
DOCUMENT TYPE: Journal
LANGUAGE: English

The MHC class-I binding affinity of an epitope is an important AB parameter detg. the immunogenicity of the peptide-MHC complex. improve the immunogenicity of an epitope derived from melanocyte lineage-specific antigen gp100, we performed amino-acid substitutions within the epitope and assayed both HLA-A\*0201 binding and CTL recognition. Anchor replacements towards the HLA-A\*0201 peptide-binding motif gave rise to peptides with higher HLA-A\*0201binding capacity compared to the wild-type epitope. In addn., several of the gp100 154-162 epitope-analogs were more efficient at target-cell sensitization for lysis by anti-gp100 154-162 CTL compared to the wild-type epitope. These altered gp100 154-162 epitopes were subsequently tested for their capacity to induce CTL responses in vivo using HLA-A\*0201/Kb transgenic mice, and in vitro using HLA-A\*0201+ donor-derived lymphocytes. Interestingly, the peptide-specific CTL obtained, which were raised against the different gp100 154-162 epitope-analogs, displayed cross-reactivity with target cells endogenously processing and presenting the native epitope. These data demonstrate that altered epitopes can be exploited to elicit native epitope-reactive CTL. The use of epitope-analogs with improved immunogenicity may contribute to the development of CTL-epitope based vaccines in viral disease and

IT 162558-08-9 (187874-51-2)

cancer.

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(analogs of cytotoxic T lymphocyte epitopes with improved MHC class-I binding capacity elicit anti-melanoma CTL recognizing wild-type epitope)

L4 ANSWER 41 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:119427 HCAPLUS

DOCUMENT NUMBER: 126:210701

TITLE: Identification of subdominant CTL epitopes of

the gp100 melanoma-associated tumor antigen by

primary in vitro immunization with peptide-pulsed dendritic cells

AUTHOR(S): Tsai, Van; Southwood, Scott; Sidney, John;

Sakaguchi, Kazuyasu; Kawakami, Yutaka; Appella,

Ettore; Sette, Alessandro; Celis, Esteban

CORPORATE SOURCE: Cytel Corp., San Diego, CA, 92121, USA

SOURCE: Journal of Immunology (1997), 158(4), 1796-1802

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CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

DOCUMENT TYPE: Journal LANGUAGE: English

The gp100 melanoma-assocd. tumor antigen (Ag) was selected as a AB model system to study the diversity of human antitumor cytotoxic T cell responses. First, peptides corresponding to dominant gp100 HLA-A2.1-restricted CTL epitopes were tested using lymphocytes from normal volunteers and an in vitro priming protocol that uses peptide-pulsed dendritic cells as APCs and IL-7 and IL-10 as immune-enhancing cytokines. High CTL activity toward both peptide-pulsed target cells and gp100+ melanoma cells was obtained with 4 out of 5 peptides tested. Second, HLA-A2.1-binding peptides from gp100 that do not appear to represent CTL epitopes in melanoma patients were also tested for their capacity to induce CTL using the in vitro priming protocol. Three of 6 peptides tested induced CTL in lymphocytes from normal volunteers. One of these peptides was also immunogenic for lymphocytes derived from a melanoma patient in remission. Because these 3 CTL epitopes were not recognized in the natural immune response in melanoma patients but do appear as immunogens when peptides are used to induce the T cell response, they may be considered as typical "subdominant" epitopes. The results are discussed in the context of the usefulness of this approach to detail the immunol. potential of a given tumor-assocd. Ag and its relevance for the design of effective immune-based therapies.

IT 162558-08-9

RL: PRP (Properties)

(subdominant cytotoxic T cell epitopes of gp100 melanoma -assocd. tumor antigen identification by primary in vitro immunization with peptide-pulsed dendritic cells)

L4 ANSWER 42 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:649156 HCAPLUS

DOCUMENT NUMBER: 125:298993

TITLE: Immunization against epitopes in the human

melanoma antigen gp100 following patient

immunization with synthetic peptides

AUTHOR(S): Salgaller, Michael L.; Marincola, Francesco M.;

Cormier, Janice N.; Rosenberg, Steven A.

CORPORATE SOURCE: Surgery Branch, Natl. Cancer Inst., Bethesda,

MD, 20892, USA

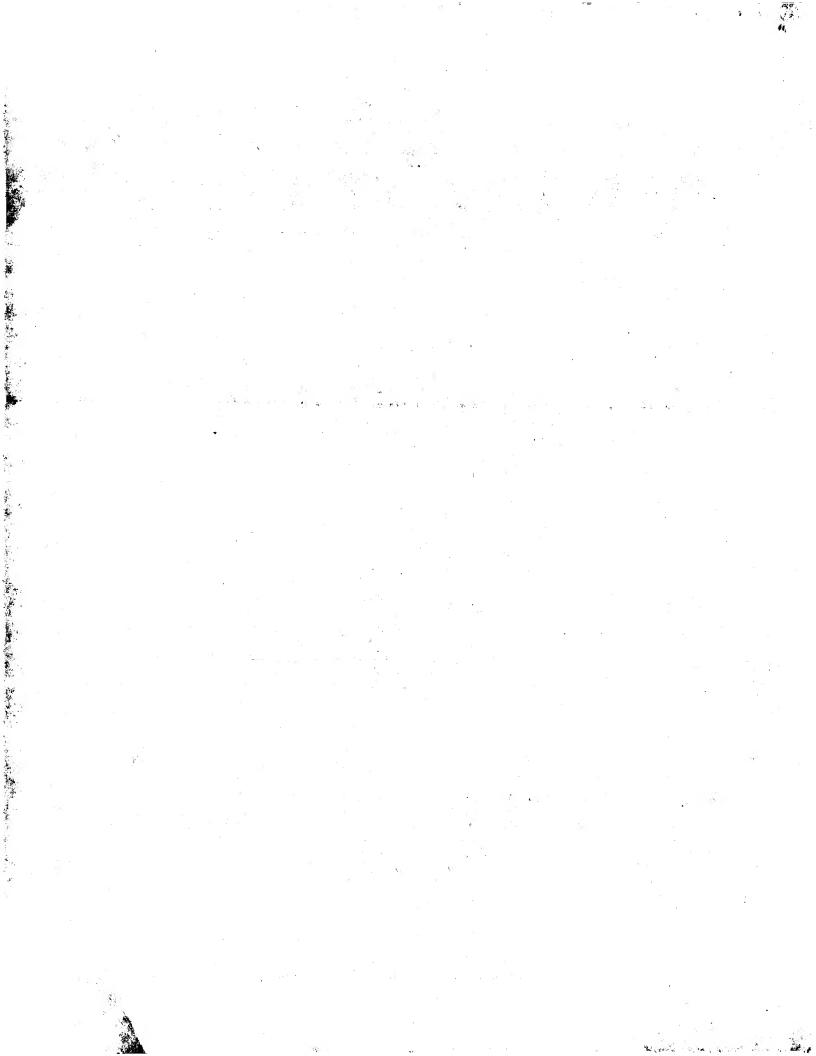
SOURCE: Cancer Research (1996), 56(20), 4749-4757

CODEN: CNREA8; ISSN: 0008-5472

PUBLISHER: American Association for Cancer Research

DOCUMENT TYPE: Journal LANGUAGE: English

The gp100 glycoprotein is a melanocytic lineage-specific antigen recognized by tumor-infiltrating lymphocytes, the adoptive transfer of which is assocd. with tumor regression in melanoma patients. In this study, peripheral blood mononuclear cells (PBMCs) were harvested from HLA-A2+ melanoma patients before and after immunization with G9-209 (ITDQVPFSY), G9-280 (YLEPGPVTA), or G9-154 (KTWGQYWQV) peptides in Incomplete Freund's Adjuvant and were tested for the ability to be sensitized in vitro using PBMCs pulsed with the native peptides. In addn., PBMCs from patients receiving the G9-209 or G9-280 peptide were stimulated in vitro with peptides modified at anchor residues to enhance binding to HLA-A2: G9-209/2M



(IMDQVPFSY) or G9-280-9V (YLEPGPVTV). In patients immunized with G9-209, a single in vitro restimulation with G9-209, a single in vitro restimulation with G9-209/2m resulted in the generation of specific antipeptide lymphocytes from 7 of 7 postimmune PBMCs and only 3 of 7 preimmune PBMCs. In patients immunized with G9-280, a single in vitro restimulation with G9-280/9V resulted in the generation of specific antipeptide lymphocytes from 5 of 6 postimmune PBMCs and 4 of 6 preimmune PBMCs. In almost all cases, CTLs raised against modified epitopes were capable of recognizing targets displaying the native nonamers. Several anti-G9-209 and anti-G9-209/2M CTLs also demonstrated specific lysis of, and specific IFN-.gamma. release in response to, gp100+ -established cell lines. Thus, using peptides modified to enhance immunogenicity for in vitro stimulation improved the sensitivity of immune monitoring of patients immunized with synthetic peptides. These results demonstrate that immunization with a peptide derived from a tumor-assocd. protein such as gp100 can provoke a measurable antitumor immune response in cancer patients.

#### IT 162558-08-9P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(immune response to human **melanoma** antigen gp100 following patient immunization with synthetic peptides)

L4 ANSWER 43 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

1996:562140 HCAPLUS

DOCUMENT NUMBER:

125:219058

TITLE:

Improved induction of melanoma-reactive CTL with

peptides from the melanoma antigen gp100 modified at HLA-A\*0201-binding residues Parkhurst, Maria R.; Salgaller, Michael L.; Southwood Scott: Pobbins Paul F. Sette

Southwood, Scott; Robbins, Paul F.; Sette, Alessandro; Rosenberg, Steven A.; Kawakami,

Yutaka

CORPORATE SOURCE:

National Cancer Institute, National Institutes

of Health, Bethesda, MD, 20892, USA

SOURCE:

Journal of Immunology (1996), 157(6), 2539-2548

CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER:

AUTHOR(S):

American Association of Immunologists

DOCUMENT TYPE: Journal LANGUAGE: English

Recognition of the melanoma Ag gp100 by tumor-infiltrating AB lymphocytes (TIL) in vitro has been correlated with tumor regression in patients with metastatic melanoma treated with the adoptive transfer of TIL plus IL-2. Three common gp100 epitopes have been identified that are recognized in the context of HLA-A2 by TIL from different patients: G9154 (KTWGQYWQV), G9209 (ITDQVPFSV), and G9280 (YLEPGPVTA). Upon stimulation with these peptides, melanoma-reactive CTL could be induced in vitro from PBL of some HLA-A2+ melanoma patients. However, numerous restimulations were required, and specific reactivity could not be generated in many patients. Therefore, to enhance the immunogenicity of gp100 peptides, amino acid substitutions were introduced into G9154, . G9209, and G9280 at HLA-A\*0201-binding anchor positions, but not at TCR contact residues, to increase peptide class I MHC-binding affinity. Several modified gp100 peptides bound with greater

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affinity to HLA-A\*0201 than unmodified peptides and were recognized by TIL specific for the neutral epitopes. These peptides were used to sensitize PBL from HLA-A2+ melanoma patients in vitro using peptide-pulsed autologous PBMC as stimulators. After five weekly restimulations with either the native G9209 or G9280 peptide, melanoma-reactive CTL could only be induced from two of seven patients. However, amino acid substitutions in these peptides enabled the induction of melanoma-reactive CTL from all seven patients. These results suggest that modified gp100 peptides may be more immunogenic than the native epitopes, and may be useful in immunotherapy protocols for patients with melanoma.

IT 162558-08-9

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(melanoma-reactive human cytotoxic T-cells are induced by gp100-derived peptides modified for enhanced HLA-A2 binding)

L4 ANSWER 44 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:282522 HCAPLUS

DOCUMENT NUMBER: 124:314539

TITLE: Binding and presentation of peptides derived

from melanoma antigens MART-1 and glycoprotein-100 by HLA-A2 subtypes.

Implications for peptide-based immunotherapy

AUTHOR(S): Rivoltini, Licia; Loftus, Douglas J.;

Barracchini, Kathleen; Arienti, Flavio; Mazzocchi, Arabella; Biddison, William E.; Salgaller, Michael L.; Appella, Ettore; Parmiani, Giorgio; Marincola, Francesco M.

CORPORATE SOURCE: Surgery Branch, National Institutes Health,

Bethesda, MD, 20892, USA

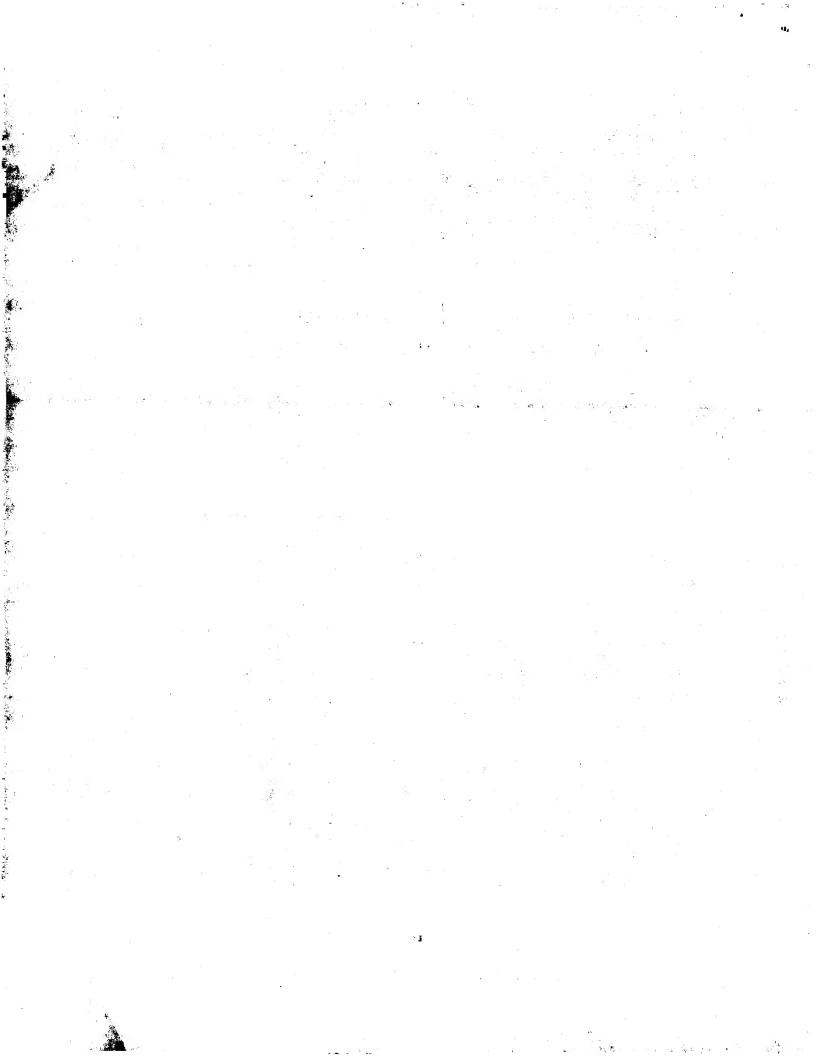
SOURCE: Journal of Immunology (1996), 156(10), 3882-3891

CODEN: JOIMA3; ISSN: 0022-1767

PUBLISHER: American Association of Immunologists

DOCUMENT TYPE: Journal LANGUAGE: English

Cellular immune responses to melanoma-assocd. Ags are the focus of ongoing studies aimed at developing immunotherapies for treatment of malignant melanoma. Melanoma predominantly affects Caucasians, a population in whom expression of HLA-A2 is prevalent. Among HLA-A2 subtypes, HLA-A\*0201 is widely expressed, and HLA-A\*0201-restricted, tumor-reactive CTL responses are well studied. We have obsd. in a group of melanoma patients an unexpectedly high frequency (.apprx.20%) of non-HLA-A\*0201 subtypes (\*0202, \*0204, and \*0205), and little is known regarding antimelanoma response profiles in patients expressing such subtypes. We analyzed non-HLA-A\*0201 peptide response profiles using HLA-A\*0201-restricted epitopes from melanoma Ags MART-1/Melan A and glycoprotein 100. Most of these peptides bound to the majority of subtypes tested with 50% inhibitory concns. less than 500 nM. Recognition of cells pulsed with different peptides (MART-1 G9154, and G9280 Flu M158-66) and expressing different subtype mols. by HLA-A\*0201-restricted CTL was limited to only a subset of non-HLA-A\*0201 mols., and the peptide/subtype complexes recognized varied among the effector populations tested. CTL responses elicited from PBL of patients and healthy donors expressing subtypes HLA-A\*0202 and HLA-A\*0205 suggested significant differences among HLA-A2 subtype function in



the context of melanoma Ag presentation. These observations imply the necessity of subtyping patients considered for peptide-based protocols and highlight the need for further study of melanoma-directed cellular responses among patients expressing non-HLA-A\*0201 subtypes.

IT 162558-08-9

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(binding and presentation of peptides derived from melanoma antigens MART-1 and glycoprotein-100 by HLA-A2 subtypes)

ANSWER 45 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN L4

1995:998386 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 124:84888

TITLE: Melanoma antigens recognized by tumor

infiltrating lymphocyte

Kawakami, Yutaka; Rosenberg, Steven A. INVENTOR(S): PATENT ASSIGNEE(S):

United States Dept. of Health and Human

Services, USA

PCT Int. Appl., 183 pp. SOURCE:

·CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

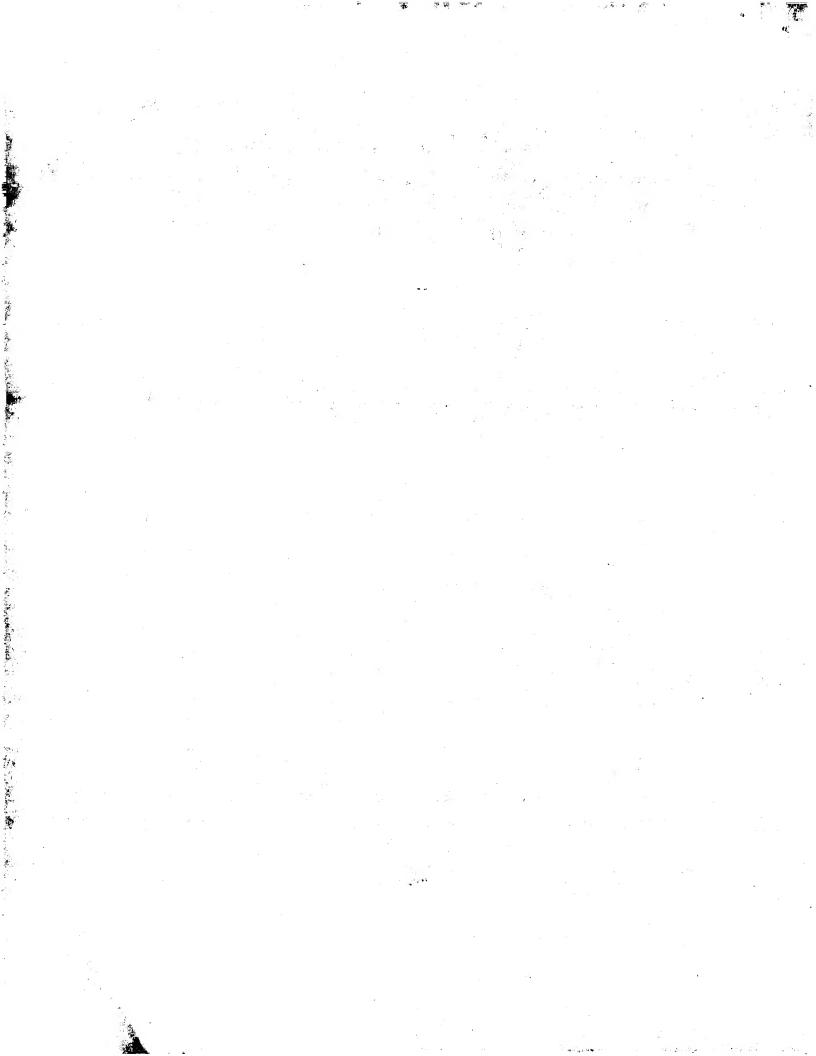
FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

|       | PATENT NO.     |                                  | KI                      | ND                | DATE               |                   |                              | •                    | API | PLIC                 | CATI              | ON NO                | ).<br>               | DATE           |             |                              |                      |     |
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|       |                | 9529:<br>9529:                   |                         |                   |                    |                   |                              |                      |     |                      | WO                | 199                  | 95-U                 | S5063          | 3           | 1995                         | 0421                 |     |
| •     |                | W:                               | AM,<br>FI,<br>LV,       | AT,<br>GB,<br>MD, | AU,<br>GE,<br>MG,  | BB,<br>HU,<br>MN, | BG,<br>IS,<br>MW,            | BR,<br>JP,           | KE, | KG                   | , 1               | KΡ,                  | KR,                  | ΚŻ,            | LK,         | DK,<br>LR,<br>SD,            | LT,                  | LU, |
|       |                | RW:                              | KE,<br>IT,              | MW,<br>LU,        |                    | SZ,<br>NL,        | UG,<br>PT,                   |                      |     |                      |                   |                      |                      |                |             | GB,<br>GA,                   |                      |     |
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|       |                |                                  | AT,<br>PT,              | BE,<br>SE         | CH,                | DE,               | DK,                          | ES,                  | FR, | GE                   | 3, (              | GR,                  | IE,                  | IT,            | LI,         | LU,                          | MC,                  | NL, |
|       | FI             | 1050<br>9604<br>2003             | 5481<br>235             |                   | Α                  |                   | 1996                         | 1220                 |     |                      | FI                | 199                  | 96-4                 | 235            |             | 1996                         | 1021                 |     |
| PRIOF | RITY           | APP                              | LN.                     | INFO<br>·         | .:                 |                   |                              |                      |     | US<br>US<br>WO<br>US | 19:<br>19:<br>19: | 94-2<br>95-4<br>95-1 | 2315<br>4171<br>US50 | 65<br>74<br>63 | A<br>A<br>W | 1994<br>1995<br>1995<br>1999 | 0422<br>0405<br>0421 |     |
| OTHER | ER SOURCE(S):  |                                  |                         |                   | MARPAT 124:8488    |                   |                              |                      |     | 88                   |                   |                      |                      |                |             |                              |                      |     |

The present invention provides a nucleic acid sequence encoding a melanoma antigen recognized by T lymphocytes, designated MART-1. This invention further reates to bioassays using the nucleic acid sequence, protein or antibodies of this invention to diagnose, assess or prognose a mammal afflicted with melanoma or metastatic

> Shears 308-4994 Searcher



melanoma. This invention also provides immunogenic peptides derived from the MART-1 melanoma antigen and a second melanoma antigen designated gp100. This invention further provides immunogenic peptides derived from the MART-1 melanoma antigen of gp100 antigen which have been modified to enhance their immunogenicity. proteins and peptides can serve as an immunogen or vaccine to prevent or treat melanoma. In example, cytotoxic T lymphocytes and culture of cell lines were prepd., immunogenic epitopes of MART-1 were characterized, and a second human melanoma antigen recognized by tumor infiltrating lymphocytes assocd. With in vivo tumor rejection was also identified. In addn., recognition of multiple epitopes in human melanoma antigen by tumor infiltrating lymphocytes, modified melanoma epitopes with improved immunogenicity, use of the improved epitopes as vaccine for treating melanoma in mammals, and use of lymphocytes sensitized to immunogenic peptides derived from melanoma antigens for therapeutically treating mammals afflicted with melanoma were demonstrated.

IT 155422-80-3

RL: PRP (Properties)

(amino acid sequence; melanoma antigens MART1 and gp100 epitopes recognized by tumor-infiltrating lymphocyte as vaccine for treating melanoma in mammals)

IT 162558-08-9 162558-09-0

RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(melanoma antigens MART1 and gp100 epitopes recognized by tumor-infiltrating lymphocyte as vaccine for treating melanoma in mammals)

L4 ANSWER 46 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1995:916208 HCAPLUS

DOCUMENT NUMBER: 123:311939

TITLE: Recognition of multiple epitopes in the human

melanoma antigen gp100 by peripheral blood lymphocytes stimulated in vitro with synthetic

peptides

AUTHOR(S): Salgaller, Micheal L.; Afshar, Alireza;

Marincola, Francesco M.; Rivoltini, Licia;

Kawakami, Yutaka; Rosenberg, Steven A.

CORPORATE SOURCE: Surgery Branch, National Institutes Health,

Bethesda, MD, 20892, USA

SOURCE: Cancer Research (1995), 55(21), 4972-9

CODEN: CNREA8; ISSN: 0008-5472

PUBLISHER: American Association for Cancer Research

DOCUMENT TYPE: Journal LANGUAGE: English

AB Gp100 is a melanocyte lineage-specific antigen recognized by tumor-infiltration lymphocytes whose adoptive transfer has been assocd. with tumor regression in patients with metastatic melanoma. The peripheral blood mononuclear cells of five melanoma patients were sensitized in vitro with synthetic peptides to elicit antigen-specific cytotoxic T lymphocyte (CTL) lines against four gp100 epitopes. These epitope-specific CTL lines were generated following weekly in vitro stimulation with the synthetic decamer G10476 (V-L-Y-R-Y-G-S-F-S-V) or the nonamers G9280 (Y-L-E-P-G-P-V-T-A), G9154 (K-T-W-G-Q-Y-W-Q-V), or G9209 (I-T-D-Q-V-P-F-S-V) pulsed onto autologous irradiated peripheral

|                   |                                       | , <del>**</del> | सक् . हे                     | ▼ v                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | . 4                                   |            |
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blood mononuclear cells. These lines grew as long as 4 mo in culture in low-dose interleukin 2 (30 IU/mL) and exhibited antigen-specific, MHC class I-restricted lysis of peptide-pulsed T2 cells and HLA-A2+, gp100+ established melanoma cell lines. G10476and G9280-specific CTLs demonstrated specific release of granulocyte-macrophage-colony-stimulating factor and tumor necrosis factor .alpha. in response to T2 cells pulsed with relevant peptide, as well as to gp100+ melanoma cell lines. These results demonstrate that several peptides derived from the gp100 protein are presented on the surface of melanoma cells and are sufficiently immunogenic to generate, in vitro, potent CTLs capable of cytolysis and the secretion of cytokines. Therefore, for HLA-A2+ melanoma patients, these and possibly other gp100 peptides could represent good candidates for antigen-specific immunotherapy either singly or in a multivalent regimen.

#### IT 162558-08-9

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(gp100-derived peptides stimulate cytotoxic T lymphocytes to release cytokines and lyse **melanoma** cells expressing gp100-derived peptides)

L4 ANSWER 47 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

1995:913438 HCAPLUS

DOCUMENT NUMBER:

123:312226

TITLE:

Melanoma associated antigenic polypeptide, epitopes thereof and vaccines against melanoma

Adema, Gosse Jan; Figdor, Carl Gustav

INVENTOR(S):

Akzo Nobel N. V., Neth.

PATENT ASSIGNEE(S): SOURCE:

Eur. Pat. Appl., 41 pp.

CODEN: EPXXDW

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

|       | PATENT NO. |      |      | KIND DATE |            |     | APPLICATION NO. |      |     | 0.      | DATE |       |      |     |      |      |     |
|-------|------------|------|------|-----------|------------|-----|-----------------|------|-----|---------|------|-------|------|-----|------|------|-----|
|       | EP         | 6683 | 50   |           | A.         | 1   | 1995            | 0823 |     | EP      | 19   | 95-20 | 0034 | 8   | 1995 | 0214 |     |
|       |            | R:   | AT,  | •         | CH,        | DE, | DK,             | ES,  | FR, | GB,     | GR,  | ΙE,   | IT,  | LI, | LU,  | MC,  | NL, |
|       |            |      | PT,  | SE        |            |     |                 |      |     |         |      |       |      |     |      |      |     |
|       | CA         | 2142 | 575  |           | Αž         | A   | 1995            | 0817 |     | CA      | . 19 | 95-21 | 1425 | 75  | 1995 | 0215 |     |
|       | FI         | 9500 | 665  |           | Α          |     | 1995            | 0817 |     | FI      | 19   | 95-66 | 65   |     | 1995 | 0215 |     |
|       | ΑU         | 9512 | 272  |           | A.         | 1   | 1995            | 0824 |     | ΑU      | 19   | 95-12 | 2272 |     | 1995 | 0215 |     |
|       | ΑU         | 6972 | 67   |           | B          | 2   | 1998            | 1001 |     |         |      |       |      |     |      |      |     |
|       | ZA         | 9501 | 239  |           | Α          |     | 1995            | 1019 |     | $z_{A}$ | . 19 | 95-12 | 239  |     | 1995 | 0215 |     |
|       | US         | 6500 | 919  |           | <b>B</b> : | 1   | 2002            | 1231 |     | US      | 19   | 95-38 | 8885 | 2   | 1995 | 0215 |     |
|       | JΡ         | 0727 | 8193 |           | A.         | 2   | 1995            | 1024 |     | JF      | 19   | 95-28 | 3387 |     | 1995 | 0216 |     |
| PRIOR | RITY       | APP  | LN.  | INFO      | . :        |     |                 |      | 1   | EP 19   | 94-  | 20033 | 37   | Α   | 1994 | 0216 |     |
|       |            |      |      |           |            |     |                 |      | ]   | EP 19   | 94-  | 20370 | 9    | Α   | 1994 | 1221 |     |
|       |            |      |      |           |            |     |                 |      |     | _       |      |       |      | _   |      | _    |     |

AB The present invention describes a melanoma associateed antigen known as gp100. Furthermore, peptides derived form said antigen are claimed. Gp100 and its peptides can be used in vaccines for the treatment of melanoma. Another aspect of the invention are host cells capable of expression of gp100 or the gp100-derived peptides. Furthermore, tumor infiltrating lymphocytes (TIL's) specifically recognizing gp100 are claimed, as are vaccines with these TIL's.

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Furthermore, diagnostics for the detection of melanoma and for the monitoring of vaccination form part of the invention.

IT 155422-80-3P

RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(amino acid sequence of; melanoma assocd. antigenic polypeptide, epitopes thereof and vaccines against melanoma)

# TT 162558-08-9 162558-09-0 167635-39-4 170153-76-1

RL: ARG (Analytical reagent use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses) (melanoma assocd. antigenic polypeptide, epitopes thereof and vaccines against melanoma)

L4 ANSWER 48 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1995:

1995:724076 HCAPLUS

DOCUMENT NUMBER:

123:196160

TITLE:

Identification of a novel peptide derived from

the melanocyte-specific GP100 antigen as the

dominant epitope recognized by an

HLA-A2.1-restricted anti-melanoma CTL line Bakker, Alexander B.H.; Schreurs, Marco W.J.;

Tafazzul, Gaalda; de Boer, Annemiek J.;

Kawakami, Yutaka; Adema, Gosse J.; Figdor, Carl

G.

CORPORATE SOURCE:

Department of Tumor Immunology, University

Hospital Nijmegen, Nijmegen, Neth.

SOURCE:

AUTHOR(S):

International Journal of Cancer (1995), 62(1),

97-102

CODEN: IJCNAW; ISSN: 0020-7136

DOCUMENT TYPE:

Journal

LANGUAGE:

English

Cytotoxic T lymphocytes (CTL) reactive with human melanoma tumor cells occasionally display cross-reactivity with normal melanocytes. Previously, we identified the melanocyte lineage-specific antigen qp100 that is expressed by both melanoma cells and normal melanocytes, as a target antigen for tumor-infiltrating lymphocytes derived from a melanoma patient (TIL 1200). Here, we demonstrate that the oligoclonal HLA-A2.1-restricted TIL 1200 line is reactive with 2 distinct peptides derived from the gp100 protein. Apart from the peptide corresponding to gp100 amino acids 457-466, we identified the gp100 peptide 154-162 as a second epitope recognized by TIL 1200. A 100-fold lower concn. of this novel gp100 peptide was required for target-cell sensitization compared to peptide 457-466, indicating that the 154-162 peptide is the dominant gp100 epitope for TIL 1200. Together with the recently described gp100 280-288 epitope, 3 distinct CTL epitopes have now been identified in gp100, all presented in the context of HLA-A2.1. Therefore, gp100 is an attractive target antigen in the development of immuno-therapeutic protocols against melanoma.

IT 162558-08-9 162558-09-0 167635-39-4

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)

(peptide from the melanocyte-specific GP100 antigen as the dominant epitope recognized by an HLA-A2.1-restricted antimelanoma CTL line)

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L4 ANSWER 49 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

1995:497876 HCAPLUS ACCESSION NUMBER:

122:263119 DOCUMENT NUMBER:

Recognition of multiple epitopes in the human TITLE:

melanoma antigen gp100 by tumor-infiltrating T

lymphocytes associated with in vivo tumor

regression

Kawakami, Yutaka; Eliyahu, Siona; Jennings, AUTHOR(S):

Christopher; Sakaguchi, Kazuyasu; Kang,

Xiaoqiang; Southwood, Scott; Robbins, Paul F.; Sette, Alexxandro; Apella, Ettore; Rosenberg,

Steven A.

Surg. Branch, Nat. Inst. Health, Bethesda, MD, CORPORATE SOURCE:

20892, USA

Journal of Immunology (1995), 154(8), 3961-8 SOURCE:

CODEN: JOIMA3; ISSN: 0022-1767

American Association of Immunologists PUBLISHER:

DOCUMENT TYPE: Journal English LANGUAGE:

Four of ten HLA-A2-restricted melanoma specific CTL that were AB derived from tumor-infiltrating lymphocytes (TIL) and administered to patients recognized the gp100 melanoma Ag and nine of ten recognized the MART-1 Ag. Adoptive transfer of the four gp100-reactive CTL, but not the other TIL, resulted in tumor regression when infused into autologous patients along with IL-2. Tumor regression was thus correlated with the recognition of gp100 by the administered T cells. To identify the epitopes recognized by these four gp100-reactive CTL, 169 peptides contg. HLA-A2.1 binding motifs were synthesized and screened for their recognition by TIL using cytotoxicity and IFN-.gamma. release assays. Five gp100 epitopes (two for TIL620, three for TIL550, one for TIL1143, and two for TIL1200) were recognized by CTL derived from different patients. Five of eight HLA-A2 binding melanoma epitopes (five gp100, one MART-1/Melan-A, two tyrosinase) had intermediate binding affinity to HLA-A2.1. These gp100 epitopes may be responsible for mediating tumor rejection in vivo and thus may be useful for the development of immunotherapies for patients with melanoma.

162558-08-9 162558-09-0 TΤ

> RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(recognition of epitopes in human melanoma antigen gp100 by HLA-A2-restricted cytotoxic T lymphocytes assocd. with in vivo tumor regression)

ANSWER 50 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN T.4

1994:697583 HCAPLUS ACCESSION NUMBER:

121:297583 DOCUMENT NUMBER:

TITLE: Molecular characterization of the melanocyte

lineage-specific antigen gp100

AUTHOR(S):

Adema, Gosse J.; de Boer, Annemiek J.; Vogel, Arthur M.; Loenen, Wil A. M.; Figdor, Carl G. Div. Immunology, Netherlands Cancer Inst.,

CORPORATE SOURCE: Amsterdam, 1066 CX, Neth.

SOURCE: Journal of Biological Chemistry (1994), 269(31),

20126-33

308-4994 Searcher : Shears

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CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal LANGUAGE: English

The glycoproteins recognized by monoclonal antibody (mAb) NKI-beteb are among the best diagnostic markers for human melanoma because their expression is restricted to melanocytic cells. Recently, the authors isolated a cDNA clone, termed gp100-c1, which confers immunoreactivity not only to mAb NKI-beteb, but also to two other mAbs used to diagnose malignant melanoma, HMB-50 and HMB-45. In this report, the authors demonstrate that gp100-c1 cDNA encodes glycoproteins of 100 kDa (gp100) and 10 kDa (gp10) which are recognized by these mAbs in human melanoma cells. The translation product deduced from the open reading frame persistent in gp100-c1 cDNA is highly homologous to another melanocyte-specific protein, Pmel17. Nucleotide sequence anal. of genomic DNA indicates that the transcripts corresponding to gp100 and Pmel17 cDNAs originate from a single gene via alternative splicing. In all normal and malignant melanocytic cells analyzed, gp100 and Pmel17 RNAs are simultaneously expressed.

IT 155422-80-3, Antigen gp100 (human melanocyte precursor clone gp100-c1)

RL: PRP (Properties)

(amino acid sequence of, mRNA alternative splicing and melanoma diagnosis in relation to)

L4 ANSWER 51 OF 51 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1994:476416 HCAPLUS

DOCUMENT NUMBER:

121:76416

TITLE:

Cloning and expression of the gene for the

melanoma-associated ME20 antigen

AUTHOR(S):

Maresh, Grace A.; Marken, John S.; Neubauer,

Michael; Aruffo, Alejandro; Hellstrom, Ingegerd;

40

Hellstrom, Karl Erik; Marquardt, Hans

CORPORATE SOURCE:

Bristol-Myers Squibb Pharm. Res. Inst., Seattle,

WA, 98121, USA

SOURCE:

DNA and Cell Biology (1994), 13(2), 87-95

CODEN: DCEBE8; ISSN: 1044-5498

DOCUMENT TYPE:

Journal

LANGUAGE:

English

Human melanoma cells, but not tumor cells of other histol. origin, express a unique membrane-assocd. glycoprotein, designated ME2-M, and secrete glycoprotein, designated Me20-S, defined by monoclonal antibody ME20. Here the authors report the isolation and characterization of a cDNA clone that when transfected into COS cells directs the expression of ME20-M and ME20-S. This cDNA contains an open reading frame which encodes a 661-amino-acid-long precursor that contains a 23-amino-acid signal peptide and a 26-amino-acid transmembrane domain, sepd. by a hydrophilic region contg. 5 potential Asn-linked and 14 predicted Pro-assocd., Thr-linked glycosylation sites. The transmembrane domain is followed by a carboxy-terminal 45-amino-acid putative intracellular domain rich in Ser residues. Anal. of ME20-M by amino acid sequencing identified the proteolytic processing site. Signal peptide cleavage occurs at the Thr-24-Lys-25 peptide bond of the precursor and results in the 637-amino-acid ME20-M with calcd. mol. wt. of 67,782. ME20-M is derived from a single 3.3- to 3.4-kb mRNA transcript that is expressed at varying levels in melanoma cell lines, correlating with immunofluorescence detn. of protein

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expression. The amino acid sequence of the ME20 antigen deduced from the cDNA differs from the human neonatal melanocyte-specific Pmel 17 gene product by a single amino acid substitution and deletion of 7 amino acid residues, and it is 80 homologous with the bovine retinal pigment RPE1 cDNA. The obsd. differences in the sequence of the melanoma-derived and normal melanocyte-derived gene products may suggest that ME20-M is a unique tumor antigen or, alternatively, an oncofetal self-antigen, if the differences in the sequences are the result of a germ-line-encoded polymorphism.

IT 155422-80-3, Melanoma-associated ME20 antigen (Human clone HF12-2 gene ME20 precursor ME20-S) RL: BIOL (Biological study)

(amino acid sequence and signal peptide and C-terminal transmembrane domain and intracellular serine-rich domain and proteolytic processing site of)

# E1 THROUGH E37 ASSIGNED

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 ANSWER 1 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
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 Tumor-associated protein (human clone WO03025138-SEQID-331) (9CI)
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OTHER NAMES:
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 1 MDLVLKRCLL HLAVIGALLA VGATKVPRNQ DWLGVSRQLR TKAWNRQLYP
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 251 LAEADLSYTW DFGDSSGTLI SRALVVTHTY LEPGPVTAQV VLQAAIPLTS
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551 QLVLHQILKG GSGTYCLNVS LADTNSLAVV STQLIMPGQE AGLGQVPLIV
 601 GILLVLMAVV LASLIYRRRL MKQDFSVPQL PHSSSHWLRL PRIFCSCPIG
 651 ENSPLLSGOO V
 154-162
HITS AT:
RELATED SEQUENCES AVAILABLE WITH SEQLINK
 1: 138:282427
REFERENCE
 ANSWER 2 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
RN
 481197-02-8 REGISTRY
 Glycoprotein gp100 (human) (9CI) (CA INDEX NAME)
CN
OTHER NAMES:
CN
 GenBank AAB19181
 GenBank AAB19181 (Translated from: GenBank U20093)
CN
CI
SQL 661
 1 MDLVLKRCLL HLAVIGALLA VGATKVPRNQ DWLGVSRQLR TKAWNRQLYP
SEQ
 51 EWTEAQRLDC WRGGQVSLKV SNDGPTLIGA NASFSIALNF PGSQKVLPDG
 101 QVIWVNNTII NGSQVWGGQP VYPQETDDAC IFPDGGPCPS GSWSQKRSFV
 151 YVWKTWGQYW QVLGGPVSGL SIGTGRAMLG THTMEVTVYH RRGSRSYVPL
 ============
 201 AHSSSAFTIT DQVPFSVSVS QLRALDGGNK HFLRNQPLTF ALQLHDPSGY
 251 LAEADLSYTW DFGDSSGTLI SRAPVVTHTY LEPGPVTAQV VLQAAIPLTS
 301 CGSSPVPGTT DGHRPTAEAP NTTAGQVPTT EVVGTTPGQA PTAEPSGTTS
 351 VQVPTTEVIS TAPVQMPTAE STGMTPEKVP VSEVMGTTLA EMSTPEATGM
 401 TPAEVSIVVL SGTTAAQVTT TEWVETTARE LPIPEPEGPD ASSIMSTESI
 451 TGSLGPLLDG TATLRLVKRQ VPLDCVLYRY GSFSVTLDIV QGIESAEILQ
 501 AVPSGEGDAF ELTVSCQGGL PKEACMEISS PGCQPPAQRL CQPVLPSPAC
 551 QLVLHQILKG GSGTYCLNVS LADTNSLAVV STQLIMPGQE AGLGQVPLIV
 601 GILLVLMAVV LASLIYRRRL MKQDFSVPQL PHSSSHWLRL PRIFCSCPIG
 651 ENSPLLSGQQ V
 154-162
HITS AT:
RELATED SEQUENCES AVAILABLE WITH SEQLINK
REFERENCE
 1: 138:135820
 ANSWER 3 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
RN
 471943-16-5 REGISTRY
 Protein (human gene pmel17) (9CI) (CA INDEX NAME)
CN
OTHER NAMES:
 8: PN: WO02081646 SEQID: 70 claimed protein
CN
CI
 MAN
SQL 661
 1 MDLVLKRCLL HLAVIGALLA VGATKVPRNQ DWLGVSRQLR TKAWNRQLYP
SEQ
 51 EWTEAQRLDC WRGGQVSLKV SNDGPTLIGA NASFSIALNF PGSQKVLPDG
 101 QVIWVNNTII NGSQVWGGQP VYPQETDDAC IFPDGGPCPS GSWSQKRSFV
 151 YVWKTWGQYW QVLGGPVSGL SIGTGRAMLG THTMEVTVYH RRGSRSYVPL
 201 AHSSSAFTIT DQVPFSVSVS QLRALDGGNK HFLRNQPLTF ALQLHDPSGY
 251 LAEADLSYTW DFGDSSGTLI SRAPVVTHTY LEPGPVTAQV VLQAAIPLTS
 301 CGSSPVPGTT DGHRPTAEAP NTTAGQVPTT EVVGTTPGQA PTAEPSGTTS
 351 VQVPTTEVIS TAPVQMPTAE STGMTPEKVP VSEVMGTTLA EMSTPEATGM
 401 TPAEVSIVVL SGTTAAQVTT TEWVETTARE LPIPEPEGPD ASSIMSTESI
 451 TGSLGPLLDG TATLRLVKRO VPLDCVLYRY GSFSVTLDIV QGIESAEILQ
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501 AVPSGEGDAF ELTVSCQGGL PKEACMEISS PGCQPPAQRL CQPVLPSPAC
 551 QLVLHQILKG GSGTYCLNVS LADTNSLAVV STQLIMPGQE AGLGQVPLIV
 601 GILLVLMAVV LASLIYRRRL MKQDFSVPQL PHSSSHWLRL PRIFCSCPIG
 651 ENSPLLSGOO V
HITS AT:
 154-162
RELATED SEQUENCES AVAILABLE WITH SEQLINK
REFERENCE
 1: 137:309478
 ANSWER 4 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
 442701-70-4 REGISTRY
CN
 5: PN: EP1222928 SEQID: 4 unclaimed protein (9CI) (CA INDEX NAME)
CI
SOL
 668
 1 MDLVLKRCLL HLAVIGALLA VGATKVPRNQ DWLGVSRQLR TKAWNRQLYP
SEO
 51 EWTEAORLDC WRGGQVSLKV SNDGPTLIGA NASFSIALNF PGSQKVLPDG
 101 QVIWVNNTII NGSQVWGGQP VYPQETDDAC IFPDGGPCPS GSWSQKRSFV
 151 YVWKTWGQYW QVLGGPVSGL SIGTGRAMLG THTMEVTVYH RRGSRSYVPL
 201 AHSSSAFTIT DQVPFSVSVS QLRALDGGNK HFLRNQPLTF ALQLHDPSGY
 251 LAEADLSYTW DFGDSSGTLI SRAPVVTHTY LEPGPVTAQV VLQAAIPLTS
 301 CGSSPVPGTT DGHRPTAEAP NTTAGQVPTT EVVGTTPGQA PTAEPSGTTS
 351 VOVPTTEVIS TAPVQMPTAE STGMTPEKVP VSEVMGTTLA EMSTPEATGM
 401 TPAEVSIVVL SGTTAAQVTT TEWVETTARE LPIPEPEGPD ASSIMSTESI
 451 TGSLGPLLDG TATLRLVKRQ VPLDCVLYRY GSFSVTLDIV QGIESAEILQ
 501 AVPSGEGDAF ELTVSCQGGL PKEACMEISS PGCQPPAQRL CQPVLPSPAC
 551 OLVLHOILKG GSGTYCLNVS LADTNSLAVV STQLIMPVPG ILLTGQEAGL
 601 GQVRLIVGIL LVLMAVVLAS LIYRRRLMKQ DFSVPQLPHS SSHWLRLPRI
 651 FCSCPIGENS PLLSGQQV
HITS AT:
 154-162
RELATED SEQUENCES AVAILABLE WITH SEQLINK
REFERENCE
 1: 137:114479
 ANSWER 5 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
 371772-43-9 REGISTRY
 Peptide, (His-Trp-Asp-Phe-Ala-Trp-Pro-Trp-Xaa-Xaa-Xaa-Lys-Thr-Trp-
 Gly-Gln-Tyr-Trp-Gln-Val-Leu-Xaa-Xaa-Trp-Pro-Trp-Ala-Phe-Asp-Trp-
 His) (9CI) (CA INDEX NAME)
OTHER NAMES:
 53: PN: WO0178655 SEQID: 311 claimed protein
CN
CI
 MAN
SQL
 32
SEO
 1 HWDFAWPWXX XKTWGQYWQV LXXXWPWAFD WH

HITS AT:
 12-20
REFERENCE
 1: 135:343268
 ANSWER 6 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
 371772-42-8 REGISTRY
 Peptide, (Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val-Leu-Xaa-Xaa-Xaa-Trp-
 Pro-Trp-Ala-Phe-Asp-Trp-His) (9CI) (CA INDEX NAME)
OTHER NAMES:
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52: PN: WO0178655 SEQID: 310 claimed protein CN MAN CI SQL 21 1 KTWGQYWQVL XXXWPWAFDW H SEQ \_\_\_\_\_ HITS AT: 1-9 REFERENCE 1: 135:343268 ANSWER 7 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN **371772-41-7** REGISTRY RN Peptide, (His-Trp-Asp-Phe-Ala-Trp-Pro-Trp-Xaa-Xaa-Xaa-Lys-Thr-Trp-CN Gly-Gln-Tyr-Trp-Gln-Val-Leu-Xaa-Xaa-Xaa-His-Trp-Asp-Phe-Ala-Trp-Pro-Trp) (9CI) (CA INDEX NAME) OTHER NAMES: 50: PN: WO0178655 SEQID: 306 claimed protein CI SQL 32 SEQ 1 HWDFAWPWXX XKTWGQYWQV LXXXHWDFAW PW HITS AT: 12-20 REFERENCE 1: 135:343268 ANSWER 8 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN L6 371772-40-6 REGISTRY RN Peptide, (Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val-Leu-Xaa-Xaa-Xaa-His-Trp-Asp-Phe-Ala-Trp-Pro-Trp) (9CI) (CA INDEX NAME) 49: PN: WO0178655 SEQID: 305 claimed protein CI MAN SQL 21 1 KTWGOYWOVL XXXHWDFAWP W SEQ 1-9 HITS AT: REFERENCE 1: 135:343268 ANSWER 9 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN 371772-39-3 REGISTRY Peptide, (His-Trp-Asp-Phe-Ala-Trp-Pro-Trp-Xaa-Xaa-Xaa-Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val-Leu) (9CI) (CA INDEX NAME) OTHER NAMES: 48: PN: WO0178655 SEQID: 304 claimed protein CN CI MAN SOL 21 1 HWDFAWPWXX XKTWGQYWQV L 12-20 HITS AT: REFERENCE 1: 135:343268

Searcher: Shears 308-4994

ANSWER 10 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN

L6 RN

371772-38-2 REGISTRY

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Peptide, (His-Trp-Asp-Phe-Ala-Trp-Pro-Trp-Xaa-Xaa-Xaa-Lys-Thr-Trp-CN Gly-Gln-Tyr-Trp-Gln-Val-Xaa-Xaa-Trp-Pro-Trp-Ala-Phe-Asp-Trp-His) (CA INDEX NAME) (9CI) OTHER NAMES: 47: PN: WO0178655 SEQID: 301 claimed protein CN CI SQL 31 SEQ 1 HWDFAWPWXX XKTWGQYWQV XXXWPWAFDW H \_\_\_\_\_ HITS AT: 12-20 REFERENCE 1: 135:343268 ANSWER 11 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN L6 RN **371772-37-1** REGISTRY Peptide, (Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val-Xaa-Xaa-Trp-Pro-CN Trp-Ala-Phe-Asp-Trp-His) (9CI) (CA INDEX NAME) 46: PN: WO0178655 SEQID: 300 claimed protein CI MAN SQL 20 SEQ ` 1 KTWGQYWQVX XXWPWAFDWH HITS AT: 1 - 9REFERENCE 1: 135:343268 ANSWER 12 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN **371772-24-6** REGISTRY Peptide, (His-Trp-Asp-Phe-Ala-Trp-Pro-Trp-Xaa-Xaa-Lys-Thr-Trp-CN Gly-Gln-Tyr-Trp-Gln-Val-Xaa-Xaa-Xaa-His-Trp-Asp-Phe-Ala-Trp-Pro-Trp) (9CI) (CA INDEX NAME) OTHER NAMES: 440: PN: WO0178655 SEQID: 296 claimed sequence CN 45: PN: WO0178655 SEQID: 296 claimed protein CI SQL 31 SEO 1 HWDFAWPWXX XKTWGQYWQV XXXHWDFAWP W ======= HITS AT: 12-20 REFERENCE 1: 135:343268 L6 ANSWER 13 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN RN **371772-23-5** REGISTRY Peptide, (Lys-Thr-Trp-Gly-Gln-Tyr-Trp-Gln-Val-Xaa-Xaa-His-Trp-Asp-Phe-Ala-Trp-Pro-Trp) (9CI) (CA INDEX NAME) OTHER NAMES: 439: PN: WO0178655 SEQID: 295 claimed sequence CN 44: PN: WO0178655 SEQID: 295 claimed protein CI SQL 20 1 KTWGQYWQVX XXHWDFAWPW SEQ \_\_\_\_

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HITS AT: 1 - 9REFERENCE 1: 135:343268 ANSWER 14 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN L6 **371772-22-4** REGISTRY RN Peptide, (His-Trp-Asp-Phe-Ala-Trp-Pro-Trp-Xaa-Xaa-Xaa-Lys-Thr-Trp-CN Gly-Gln-Tyr-Trp-Gln-Val) (9CI) (CA INDEX NAME) OTHER NAMES: 438: PN: WO0178655 SEQID: 294 claimed sequence CN 43: PN: WO0178655 SEQID: 294 claimed protein CN CISQL 20 1 HWDFAWPWXX XKTWGQYWQV SEQ 12-20 HITS AT: REFERENCE 1: 135:343268 ANSWER 15 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN L6 **371771-65-2** REGISTRY RN CN L-Histidine, L-histidyl-L-tryptophyl-L-.alpha.-aspartyl-L- $\verb|phenylalanyl-L-alanyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-lysyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-tr$ threonyl-L-tryptophylglycyl-L-glutaminyl-L-tyrosyl-L-tryptophyl-Lglutaminyl-L-valyl-L-leucyl-L-tryptophyl-L-prolyl-L-tryptophyl-Lalanyl-L-phenylalanyl-L-.alpha.-aspartyl-L-tryptophyl- (9CI) (CA INDEX NAME) OTHER NAMES: 54: PN: WO0178655 SEQID: 313 claimed protein CI MAN SQL 26 SEQ 1 HWDFAWPWKT WGQYWQVLWP WAFDWH \_\_ \_\_\_\_ HITS AT: 9-17 REFERENCE 1: 135:343268 ANSWER 16 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN L6 **371771-64-1** REGISTRY RNL-Tryptophan, L-histidyl-L-tryptophyl-L-.alpha.-aspartyl-L-CN phenylalanyl-L-alanyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-lysyl-Lthreonyl-L-tryptophylglycyl-L-glutaminyl-L-tyrosyl-L-tryptophyl-Lglutaminyl-L-valyl-L-leucyl-L-histidyl-L-tryptophyl-L-.alpha.aspartyl-L-phenylalanyl-L-alanyl-L-tryptophyl-L-prolyl- (9CI) (CA INDEX NAME) OTHER NAMES: 51: PN: WO0178655 SEQID: 309 claimed protein CN CI -SQL 26 SEO 1 HWDFAWPWKT WGQYWQVLHW DFAWPW == ====== HITS AT: 9-17 1: 135:343268 REFERENCE

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ANSWER 17 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
 370891-79-5 REGISTRY
RN
 L-Histidine, L-lysyl-L-threonyl-L-tryptophylglycyl-L-glutaminyl-L-
CN
 tyrosyl-L-tryptophyl-L-glutaminyl-L-valyl-L-leucyl-L-tryptophyl-L-
 prolyl-L-tryptophyl-L-alanyl-L-phenylalanyl-L-.alpha.-aspartyl-L-
 tryptophyl- (9CI) (CA INDEX NAME)
SQL
 18
 1 KTWGQYWQVL WPWAFDWH
SEQ

 1 - 9
HITS AT:
REFERENCE
 1:
 135:343268
 ANSWER 18 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
RN
 370891-78-4 REGISTRY
 L-Tryptophan, L-lysyl-L-threonyl-L-tryptophylglycyl-L-glutaminyl-L-
CN
 tyrosyl-L-tryptophyl-L-glutaminyl-L-valyl-L-leucyl-L-histidyl-L-
 tryptophyl-L-.alpha.-aspartyl-L-phenylalanyl-L-alanyl-L-tryptophyl-L-
 prolyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
 452: PN: W00178655 SEQID: 308 claimed sequence
SQL
 18
SEQ
 1 KTWGQYWQVL HWDFAWPW
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HITS AT:
 1 - 9
REFERENCE
 1:
 135:343268
 ANSWER 19 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
1.6
RN
 370891-77-3 REGISTRY
 L-Leucine, L-histidyl-L-tryptophyl-L-.alpha.-aspartyl-L-phenylalanyl-
CN
 \verb|L-alanyl-L-tryptophyl-L-tryptophyl-L-lysyl-L-threonyl-L-tryptophyl-L-tryptophyl-L-threonyl-L-threonyl-L-tryptophyl-L-threonyl-L-tryptophyl-L-threonyl-L-tryptophyl-L-threony
 tryptophylglycyl-L-glutaminyl-L-tyrosyl-L-tryptophyl-L-glutaminyl-L-
 valyl- (9CI)
 (CA INDEX NAME)
OTHER NAMES:
 451: PN: WO0178655 SEQID: 307 claimed sequence
CN
SOL
SEO
 1 HWDFAWPWKT WGQYWQVL
HITS AT:
 9-17
REFERENCE
 135:343268
 1:
 ANSWER 20 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
RN
 370891-76-2 REGISTRY
 L-Histidine, L-histidyl-L-tryptophyl-L-.alpha.-aspartyl-L-
CN
 phenylalanyl-L-alanyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-lysyl-L-
 threonyl-L-tryptophylglycyl-L-glutaminyl-L-tyrosyl-L-tryptophyl-L-
 glutaminyl-L-valyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-alanyl-L-
 phenylalanyl-L-.alpha.-aspartyl-L-tryptophyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
 447: PN: WO0178655 SEQID: 303 claimed sequence
CN
SQL
SEO
 1 HWDFAWPWKT WGQYWQVWPW AFDWH
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|         |     | 34    |                                          |   |            |             |       | •          |     |                    | .*  |                   |
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HITS AT: 9-17

REFERENCE 1: 135:343268

L6 ANSWER 21 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN

RN **370891-75-1** REGISTRY

CN L-Histidine, L-lysyl-L-threonyl-L-tryptophylglycyl-L-glutaminyl-L-tyrosyl-L-tryptophyl-L-glutaminyl-L-valyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-alanyl-L-phenylalanyl-L-alpha.-aspartyl-L-tryptophyl-(9CI) (CA INDEX NAME)

OTHER NAMES:

CN 446: PN: WO0178655 SEQID: 302 claimed sequence

SQL 17

SEQ 1 KTWGQYWQVW PWAFDWH

HITS AT: 1-9

REFERENCE 1: 135:343268

L6 ANSWER 22 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN

RN 370891-74-0 REGISTRY

CN L-Tryptophan, L-histidyl-L-tryptophyl-L-.alpha.-aspartyl-L-phenylalanyl-L-alanyl-L-tryptophyl-L-prolyl-L-tryptophyl-L-lysyl-L-threonyl-L-tryptophylglycyl-L-glutaminyl-L-tyrosyl-L-tryptophyl-L-glutaminyl-L-tryptophyl-L-phistidyl-L-tryptophyl-L-.alpha.-aspartyl-L-phenylalanyl-L-alanyl-L-tryptophyl-L-prolyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 443: PN: WO0178655 SEQID: 299 claimed sequence

SQL 25

SEQ 1 HWDFAWPWKT WGQYWQVHWD FAWPW

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HITS AT: 9-17

REFERENCE 1: 135:343268

L6 ANSWER 23 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN

RN **370891-73-9** REGISTRY

CN L-Tryptophan, L-lysyl-L-threonyl-L-tryptophylglycyl-L-glutaminyl-L-tyrosyl-L-tryptophyl-L-glutaminyl-L-valyl-L-histidyl-L-tryptophyl-L-alpha.-aspartyl-L-phenylalanyl-L-alanyl-L-tryptophyl-L-prolyl-(9CI) (CA INDEX NAME)

OTHER NAMES:

CN 442: PN: WOO178655 SEQID: 298 claimed sequence

SQL 17

SEQ 1 KTWGQYWQVH WDFAWPW

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HITS AT: 1-9

REFERENCE 1: 135:343268

L6 ANSWER 24 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN

RN **370891-72-8** REGISTRY

CN L-Valine, L-histidyl-L-tryptophyl-L-alpha.-aspartyl-L-phenylalanyl-L-alanyl-L-tryptophyl-L-tryptophyl-L-tryptophyl-L-threonyl-L-

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tryptophylglycyl-L-glutaminyl-L-tyrosyl-L-tryptophyl-L-glutaminyl-
 (9CI) (CA INDEX NAME)
OTHER NAMES:
 441: PN: WO0178655 SEQID: 297 claimed sequence
CN
SQL
 17
 1 HWDFAWPWKT WGQYWQV
SEQ
 == ======
 9-17
HITS AT:
REFERENCE
 1: 135:343268
 ANSWER 25 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
 337989-60-3 REGISTRY
RN
 (CA INDEX
 Tumor-associated antigen gp100 (human derivative) (9CI)
CN
 NAME)
OTHER NAMES:
 109: PN: WOO130382 SEQID: 110 claimed protein
CN
 2: PN: WO0149317 SEQID: 2 claimed protein
ÇN
CN
 Glycoprotein gp100 (synthetic human)
CI
 MAN
SQL
 661
 1 MDLVLKRCLL HLAVIGALLA VGATKVPRNQ DWLGVSRQLR TKAWNRQLYP
SEQ
 51 EWTEAQRLDC WRGGQVSLKV SNDGPTLIGA NASFSIALNF PGSQKVLPDG
 101 QVIWVNNTII NGSQVWGGQP VYPQETDDAC IFPDGGPCPS GSWSQKRSFV
 151 YVWKTWGQYW QVLGGPVSGL SIGTGRAMLG THTMEVTVYH RRGSRSYVPL
 _____ ==
 201 AHSSSAFTIM DQVPFSVSVS QLRALDGGNK HFLRNQPLTF ALQLHDPSGY
 251 LAEADLSYTW DFGDSSGTLI SRALVVTHTY LEPGPVTVQV VLQAAIPLTS
 301 CGSSPVPGTT DGHRPTAEAP NTTAGQVPTT EVVGTTPGQA PTAEPSGTTS
 351 VQVPTTEVIS TAPVQMPTAE STGMTPEKVP VSEVMGTTLA EMSTPEATGM
 401 TPAEVSIVVL SGTTAAQVTT TEWVETTARE LPIPEPEGPD ASSIMSTESI
 451 TGSLGPLLDG TATLRLVKRQ VPLDCVLYRY GSFSVTLDIV QGIESAEILQ
 501 AVPSGEGDAF ELTVSCQGGL PKEACMEISS PGCQPPAQRL CQPVLPSPAC
 551 QLVLHQILKG GSGTYCLNVS LADTNSLAVV STQLIMPGQE AGLGQVPLIV
 601 GILLVLMAVV LASLIYRRRL MKQDFSVPQL PHSSSHWLRL PRIFCSCPIG
 651 ENSPLLSGQQ V
 154-162
HITS AT:
RELATED SEQUENCES AVAILABLE WITH SEQLINK
 135:106284
REFERENCE
 1:
REFERENCE
 2:
 134:339527
 ANSWER 26 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
RN
 337916-59-3 REGISTRY
 Glycine, L-tyrosyl-L-valyl-L-tryptophyl-L-lysyl-L-threonyl-L-
CN
 tryptophylglycyl-L-glutaminyl-L-tyrosyl-L-tryptophyl-L-glutaminyl-L-
 valyl-L-leucylglycyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
 25: PN: WO0130382 TABLE: 4 unclaimed sequence
CN
SQL
SEO
 1 YVWKTWGQYW QVLGG
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REFERÈNCE 1: 134:339527 ANSWER 27 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN L6 **332959-84-9** REGISTRY RN 3: PN: WOO123577 FIGURE: 1 unclaimed sequence (9CI) (CA INDEX NAME) CN MAN CI SQL 92 SEO 1 AAGIGILTVF LWGPRALVML LAVLYCLLLD GTATLRLKTW GQYWQVYMDG 51 TMSQYITDQV PFSVYLPPGT VTAILTVILG VLVLPDVFIR CV HITS AT: 38-46 REFERENCE 1: 134:279565 ANSWER 28 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN L6 332959-83-8 REGISTRY RN 2: PN: WO0123577 SEQID: 24 unclaimed protein (9CI) (CA INDEX NAME) CN OTHER NAMES: 23: PN: WO0127291 SEQID: 24 unclaimed sequence CN CI MAN SQL 92 1 AAGIGILTVF LWGPRALVME LAVLYCLLLD GTATLRLKTW GQYWQVYMDG SEQ === ===== 51 TMSDVITDQV PFSVYLEFGP VTAILTVILG VLVLPDVFIR CV HITS AT: 38-46 REFERENCE 1: 134:309695 REFERENCE 2: 134:279565 L6 ANSWER 29 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN **250672-73-2** REGISTRY Antigen (synthetic human melanoma-associated polyepitope) (9CI) (CA INDEX NAME) CI MAN SQL 93 1 MAAGIGILTV FLWGPRALVM LLAVLYCLLL DGTATLRLKT WGQYWQVYMD SEQ == ====== 51 GTMSQVITDQ VPFSVYLEPG PVTAILTVIL GVLVLPDVFI RCV 39-47 HITS AT: 1: 131:350041 REFERENCE ANSWER 30 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN L6 RN 244224-43-9 REGISTRY Melanoma-associated antigen gp100 (human) (9CI) (CA INDEX NAME) OTHER NAMES: PN: WO9947102 SEQID: 6 claimed protein CN CI MAN SQL 662 SEO 1 MDLVLKRCLL HLAVIGALLA VGATKVPRNQ DWLGVSRQLR TKAWNRQLYP

Searcher: Shears 308-4994

51 EWTEAQRLDC WRGGQVSLKV SNDGPTLIGA NASFSIALNF PGSQKVLPDG 101 QVIWVNNTII NGSQVWGGQP VYPQETDDAC IFPDGGPCPS GSWSQKRSFV

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 201 AHSSSAFTIT DQVPFSVSVS QLRALDGGNK HFLRNQPLTF ALQLHDPSGY
 251 LAEADLSYTW DFGDSSGTLI SRALVVTHTY LEPGPVTAQV VLQAAIPLTS
 301 CGSSPVPGTT DGHRPTAEAP NTTAGQVPTT EVVGTTPGQA PTAEPSGTTS
 351 VQVPTTEVIS TAPVQMPTAE STGMTPEKVP VSEVMGTTLA EMSTPEATGM
 401 TPAEVSIVVL SGTTAAQVTT TEWVETTARE LPIPEPEGPD ASSIMSTESI
 451 TGSLGPLLDG TATLRLVKRQ VPLDCVLYRY GSFSVTLDIV QGIESAEILQ
 501 AVPSGEGDAF ELTVSCQGGL PKEACMEISS PGCQPPAQRL CQPVLPSPAC
 551 QLVLHQILKG GSGTYCLNVS LADTNSLAVV STQLIMPGQE AGLGQVPLIV
 601 GILLVLMAVV LASLIYRRRL MKQDFSVPQL PHSSSHWLRL PRIFCSCPIG
 651 ENSPLLSGOO VX
HITS AT:
 154-162
REFERENCE
 1: 131:256325
 ANSWER 31 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
L6
RN
 202393-35-9 REGISTRY
 L-Valine, L-lysyl-L-valyl-L-tryptophylglycyl-L-glutaminyl-L-tyrosyl-
CN
 L-tryptophyl-L-alanyl- (9CI) (CA INDEX NAME)
SQL
SEQ
 1 KVWGQYWAV

HITS AT:
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 1: 128:139756
REFERENCE
 ANSWER 32 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
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 187974-51-2 REGISTRY
RN
CN
 L-Valine, L-lysyl-L-threonyl-L-tryptophylglycyl-L-glutaminyl-L-
 tyrosyl-L-tryptophyl-L-alanyl- (9CI) (CA INDEX NAME)
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 ANSWER 33 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
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 170153-76-1 REGISTRY
 CN
 L-lysyl]-L-threonyl]-L-tryptophyl]glycyl]-L-glutaminyl]-L-tyrosyl]-L-
 tryptophyl]-L-glutaminyl]-L-valyl]- (9CI) (CA INDEX NAME)
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Searcher :

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167635-39-4 REGISTRY
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 lysyl]-L-threonyl]-L-tryptophyl]glycyl]-L-glutaminyl]-L-tyrosyl]-L-
 tryptophyl]-L-glutaminyl]- (9CI) (CA INDEX NAME)
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 ANSWER 35 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
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 162558-09-0 REGISTRY
RN
 L-Leucine, L-lysyl-L-threonyl-L-tryptophylglycyl-L-glutaminyl-L-
CN
 tyrosyl-L-tryptophyl-L-glutaminyl-L-valyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
 L-Leucine, N-[N-[N-[N-[N-[N-[N-[N-[N-[N-[N-L-lysyl-L-threonyl)-L-
 tryptophyl]glycyl]-L-glutaminyl]-L-tyrosyl]-L-tryptophyl]-L-
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 ANSWER 36 OF 37 REGISTRY COPYRIGHT 2003 ACS on STN
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RN
 L-Valine, L-lysyl-L-threonyl-L-tryptophylglycyl-L-glutaminyl-L-
CN
 tyrosyl-L-tryptophyl-L-glutaminyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
 L-Valine, N-[N2-[N-[N-[N2-[N-(N-L-lysyl-L-threonyl)-L-
 tryptophyl]glycyl]-L-glutaminyl]-L-tyrosyl]-L-tryptophyl]-L-
 glutaminyl]-
OTHER NAMES:
 11: PN: WO03024480 PAGE: 84 unclaimed sequence
CN
 15: PN: WO0119408 SEQID: 15 unclaimed sequence
CN
 161: PN: WO0178655 SEQID: 14 claimed sequence
CN
 16: PN: FR2812087 SEQID: 15 unclaimed sequence
CN
 22: PN: WO0053161 SEQID: 61 unclaimed sequence
CN
 26: PN: US6531451 SEQID: 26 unclaimed sequence
CN
 29: PN: WO0236146 SEQID: 29 claimed sequence
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CN
 30: PN: WO0193835 SEQID: 61 unclaimed sequence
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 32: PN: WO0021551 SEQID: 32 claimed sequence
CN
 335: PN: US20020007173 SEQID: 378 unclaimed sequence
 34: PN: WO0050589 SEQID: 34 unclaimed sequence
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35: PN: US6291430 SEQID: 71 unclaimed sequence
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 35: PN: WO0006598 SEQID: 36 unclaimed sequence
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 36: PN: US6245525 SEQID: 30 unclaimed sequence
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 36: PN: WO0020445 SEQID: 26 unclaimed sequence
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 37: PN: WO0129220 SEQID: 35 unclaimed sequence
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 45: PN: WO0127291 SEQID: 2 unclaimed sequence
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 46: PN: WO0013699 SEQID: 42 unclaimed sequence
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 4: PN: WO0123577 SEQID: 2 claimed sequence
 56: PN: WO0020581 SEQID: 71 unclaimed sequence
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 57: PN: WO0153833 SEQID: 42 unclaimed sequence
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 5: PN: WO02065992 SEQID: 5 claimed sequence
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 67: PN: WO0078806 SEQID: 67 unclaimed sequence
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 68: PN: WO0032785 SEQID: 34 unclaimed sequence
 PN: WO9950637 SEQID: 30 unclaimed protein
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 PN: WO9953061 SEQID: 30 unclaimed sequence
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 Antigen ME 20 (human clone hf12-2 precursor reduced) (9CI)
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OTHER NAMES:
 215: PN: WOO190197 SEQID: 817 unclaimed protein
CN
 2: PN: WO0170767 SEQID: 2 unclaimed protein
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 2: PN: WO0192294 SEQID: 2 claimed protein
CN
 Antigen (human melanoma gene gp100)
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 Antigen gp 100 (human clone gp100-c1 precursor reduced)
 Antigen gp 100 (human melanoma-associated)
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 Antigen MAA (human melanoma-assocd. antigen)
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 Melanoma-associated ME20 antigen (Human clone HF12-2 gene ME20
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HITS AT: 154-162

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 136:49291

REFERENCE 2: 136:31665

REFERENCE 3: 135:267217

REFERENCE 4: 124:222382

REFERENCE 5: 124:84888

REFERENCE 6: 123:312226

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